

***United States Court of Appeals
for the Second Circuit***



APPELLEE'S BRIEF

13
P/S
74-1496

United States Court of Appeals
FOR THE SECOND CIRCUIT

KOPPERS COMPANY, INC.,

and

UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION,

Plaintiffs-Appellees,

v.

S & S CORRUGATED PAPER MACHINERY CO., INC.,

Defendant-Appellant.

APPELLEES' BRIEF

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UNITED STATES COURT OF APPEALS
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and

UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION,

Plaintiffs-Appellees

v.

Docket No.
74-1496

S & S CORRUGATED PAPER MACHINERY CO., INC.

Defendant-Appellant

APPELLEES' BRIEF

I. PRELIMINARY STATEMENT

This is an appeal in a patent case from a Judgment Order of the Honorable Mark A. Costantino, United States District Judge entered by the Clerk of the United States District Court for the Eastern District of New York on February 20, 1974. (App.606a) The opinion of the Court below finding the patent (Claim i) not infringed and invalid as an obvious mechanical combination of an old box blank understacker to which an old alignment slapper and an old top pusher have been added is reported at 367 F.Supp. 55 (App.609a).

II. STATEMENT OF ISSUES PRESENTED FOR REVIEW

Where the patent in suit claims a device for understacking cardboard box blanks having a slapper for aligning the stack and a pusher for removing the top of the stack:

1. Did the District Court err in finding the only claim at issue of the patent in suit invalid under 35 U.S.C. §103 for obviousness over prior art when:
 - a) the basic understacker of the claim is old as shown by the prior art Greenwood patent understacker (App.E, Tab No. 8),
 - b) the structures added by the claim to the prior art Greenwood understacker are:
 - (1) an old slapper which straightens a pile of blanks, and
 - (2) an old top pusher which removes a top portion of the blank stack,
 - c) the only limited point of novelty found by the Patent Examiner, "a pusher plate mounted for vertical movement":
 - (1) was added after a fourth (4th) rejection to get the claim allowed, and it
 - (2) was proved conclusively by testimony at the trial and by prior art patents, not cited by the Patent Examiner, that a pusher plate mounted for limited vertical movement was an old and obvious expedient and this evidence was not contested,
 - d) the level of ordinary skill in the pertinent art was high, and
 - e) the claimed combination united old unclaimed elements with no change in their functions?

2. Did the District Court err in evoking the Doctrine of File Wrapper Estoppel in holding that Koppers Universal Understackers do not infringe the only claim at issue where:

- a) in rejecting the claim the Patent Examiner stated that the only novelty appears in the vertically movable pusher plate which moves upwardly to allow box blanks to continuously accumulate in the stack under the pusher plate while the pusher plate is removing blanks from the top of the stack,
- b) and thereupon the claim was amended by S & S to include those limitations, viz: that the stack be fed with blanks while the movable pusher plate is removing blanks from the top of the stack, and the pusher plate is mounted for limited vertical movement to permit the pusher plate to move upwardly during blank accumulation which allows the pusher plate to rise with the rising underlying stack, and
- c) the Koppers Universal Understackers do not have the subject matter of the claim added by amendment, viz:
 - (1) an underfeed or accumulation of blanks in a stack under a moving pusher plate, and
 - (2) a pusher plate that moves vertically while removing blanks from the top of the stack because of an accumulation of blanks in the stack under the pusher plate?
- d) the Koppers production understackers (all Koppers' understackers except a single prototype) lack a complete support element required by the claim for a plurality of elements.

3. Apart from the finding of non-infringement based on the Doctrine of File Wrapper Estoppel, did the District Court err in holding that Koppers' Universal Understackers do not infringe the patent because the closeness of the prior art restricted the breadth of the patent claim where:

- a) the Koppers understacker does not accumulate blanks under a moving pusher plate because its piston operated pusher plate moves extremely rapidly over only 5 inches of the blank stack in about one-fifth of a second, which is too fast and too short a distance to permit accumulation of blanks in the understacker during the pusher movement,
- b) the Koppers understacker uses the 5 inch movement of the pusher plate over the stack to move the blank into contact with vertical side rollers, and
- c) the Koppers understackers use the vertical side rollers and not the pusher plate to actually remove the blanks from the top of the stack?

4. Apart from the finding of non-infringement based on the Doctrine of File Wrapper Estoppel, did the District Court err in holding that Koppers' Universal Understackers do not infringe the patent when there is no identity of structure, function, and operational means between the claimed subject matter and Koppers' accused devices where:

- 1) the Koppers side rollers remove the top of the stack instead of the pusher plate removing the top of the stack,
- 2) the Koppers devices use a piston and cylinder support and not the support means in the form of a double bicycle chain required by the claim,
- 3) the Koppers pusher plate operates intermittently and not periodically as required by the claim,
- 4) the Koppers slappers pivot and do not reciprocate as required by the claim,
- 5) the Koppers devices do not have a plurality of blanks accumulating under a moving pusher plate, nor do they have a pusher plate which moves vertically upwardly as the stack of blanks rises as required by the claim, and
- 6) the Koppers production devices lack a complete support element for the pusher plate required by the claim for a combination of elements?

III. STATEMENT OF THE CASE

This is an appeal in a patent case wherein the Court below found the patent (Claim 1) invalid for obviousness and not infringed.

Plaintiffs-Appellees Koppers Company, Inc. and Universal Corrugated Box Machinery Corporation (hereinafter collectively referred to as "Koppers") in its complaint (App. 5a) requested a declaratory judgment that U.S. Patent No. 2,988,236 (App. E1) assigned to Defendant-Appellant, S & S Corrugated Paper Machinery Co., Inc. (hereinafter referred to as "S & S") is invalid and not infringed by Koppers. S & S counterclaimed for patent infringement. By stipulation the only issues to be tried were the validity, infringement and enforceability of Claim 1 of the patent in suit (App. 22a).

Prior to the trial, the Court made a personal inspection of Koppers' and S & S's machines in operation at factories in the State of New Jersey in the company of the attorneys for both parties (App. 23a). The parties had fair notice of the scheduled trial date which was postponed by the Court on several occasions at S & S's request because of the unavailability of its witnesses. A five day trial without jury commenced on February 6, 1973, during which five witnesses testified and were extensively

cross-examined. The trial concluded when S & S had no further evidence to present (App. 604a).

After the trial the Court received extensive post-trial and reply briefs from both sides and several months thereafter the Court announced its decision in a twenty-five page opinion dated November 28, 1973 (App. 609a). This opinion includes detailed findings of fact supporting its holding that the patent in suit is not infringed and is invalid because the claim is drawn to an obvious combination of an old Greenwood understacker to which an old alignment slapper and an old top pusher have been added.

The Parties

S & S, the owner of the patent in suit, is a multinational manufacturing company, which has a major position in the corrugated box machinery industry, having sold more than 300 of the approximately 750 large and expensive folder gluers for manufacturing cardboard boxes presently existing in the United States (App. 355a, 454-455a, 474-476a). In accordance with corporate policy established by its chief executive officer, S & S sells its patented understacker only when a customer also buys an expensive unpatented folder gluer which costs approximately four times as much as the understacker (App. 455a, 474-476a, App. E115, E116).

Koppers is a publicly held corporation and Universal Corrugated Box Machinery Corporation is a wholly-owned subsidiary which manufactures the Koppers Universal Understackers.

IV. STATEMENT OF THE FACTS

SUMMARY OF FACTS RE VALIDITY

Patent In Suit Claims An Obvious Combination Of An Old Understacker To Which A Well-Known Slapper And Top Pusher Plate Have Been Added

The claim at issue recites a combination or assemblage of old parts for a box blank understacker which parts were well known and performed the same functions in the prior art of material handling. This combination claim calls for the following known elements:

Element 1 - Old Understacker With
Conveyor And Two Plates

A box blank underfeed stacker having a conveyor to move box blanks under one plate of a pair of plates for accumulating the blanks in a stack between the plates;

Element 2 - An Old Slapper

One of the plates is a stack slapper plate the reciprocates back and forth to align the stack of blanks;

Element 3 - An Old Top Pusher

A pusher for removing the top portion of the stack, and

Element 4 - The Top Pusher Of Element 3 Is
Mounted For Vertical Movement

The pusher is mounted for vertical movement to allow it to move upwardly as blanks being fed beneath the stack accumulate and cause the stack to rise under the pusher during removal of the top portion of the stack.

Basic Understacker Of Claim Is Old

The basic understacker of Claim 1 is old. The prior art Greenwood patent (App. E, Tab No. 8) discloses the basic box blank understacker having the conveyor for underfeeding blanks for accumulation between two plates required by Claim 1. In its brief, at pages 6-9, 25 and 27, S & S argues that the Spiess patent (App. E, Tab 2) and the right angle stacker are the most pertinent prior art. This argument by S & S fails to face the basic issue of invalidity in the case because the claim is for an understacker and not a right angle stacker. This S & S argument is designed to lead the Court away from the prior art Greenwood patent which shows that the basic box blank understacker of Claim 1 is old.

The only structures added by the claim to the old Greenwood understacker are an old slapper and an old top pusher which were shown to be prior art as follows:

- (1) an old slapper which straightens a pile of blanks was shown to be old by the prior art Evans patent (App. E, Tab No. 7) or the prior art Taylor patent (App. E, Tab No. 3), and
- (2) an old top pusher which removes a top portion of the blank stack was shown to be old by the prior art patent to Hart (App. E, Tab No. 4).

Prior to a final amendment, made by S & S to get the claim allowed, the Patent Examiner, in rejecting for the third time the

claim to a Greenwood understacker provided with an old slapper and top pusher concluded (App.E58):

"***these expedients would be within the skill of the average mechanic and would not produce any new or unobvious results."

The only limited point of alleged novelty found by the Patent Examiner and added as a limitation to get the claim allowed after a fourth (4th) rejection was "a pusher plate being mounted for vertical movement." However, the uncited prior art patents to Crank (App.E, Tab No.14) and Kottman (App.E, Tab No.15) which were not before the Patent Examiner both teach that pusher plates mounted to allow vertical movement when the underlying surfaces rise are old. No patent cited by the Patent Office showed a pusher plate which was mounted to move vertically when there was a rise in the underlying surface. In addition the testimony presented at the trial conclusively proved that a pusher plate mounted for vertical movement was an obvious and well known expedient (App.281a-283a) and this evidence was not contested.

Thus, Claim 1 of the suit patent is a combination claim for an aggregation of four (4) mechanical elements or parts, each of which was shown at the trial to be old and to function in the same manner as the prior art devices disclosing each of these mechanical parts. Accordingly the Court's finding of fact that to provide the old Greenwood understacker with an old slapper and an old top pusher mounted in a known manner for vertical movement was an obvious expedient was clearly correct. This conclusion is buttressed by the fact that the level of skill of the ordinary person in the art was high.

SUMMARY OF FACTS RE INFRINGEMENT

No Infringement - S & S Is Estopped From Claiming Infringement By Understackers Which Do Not Have An Underfeed Of Box Blanks Causing Blank Accumulation and Vertical Pusher Movement

S & S is prevented by the Doctrine of File Wrapper Estoppel from asserting that Koppers infringes the patent because S & S cannot recapture subject matter it voluntarily gave up when it amended Claim 1 in order to obtain its allowance.

The file history (App. E18) of the patent in suit shows that after three (3) rejections on the prior art and a fourth (4th) rejection for failure to point out and distinctly claim the alleged invention, the Examiner required an amendment to add novelty as follows (App. E68):

"***The novelty of the invention appears to reside in the vertically movable pusher plate so that the blanks can continuously accumulate while the pusher plate is removing a top portion of the stack. It is suggested that the word -- accumulating -- be inserted after the word "said", line 16, claim 1. This indicates some functional purpose of the contact of the pusher with the blank stack." (Emphasis supplied)

Rather than filing an appeal in order to overcome the Examiner's rejection, S & S instead voluntarily amended Claim 1 to meet the Examiner's requirement for an amendment adding novelty to the claim. The amendment thereby limited the claim by requiring a pusher plate mounted for vertical movement so that it will move upwardly while the pusher is removing the top portion of

the stacks and blanks are being fed underneath and accumulating, causing the underlying stack to rise. The language of the amendment is as follows (App. E70):

"Claim 1, line 16 - replace period (.) with , said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate, said stock (sic) being fed with blanks as the movable plate is removing said top portion from the stack." (Emphasis supplied)

In submitting the above amendment to Claim 1, the S & S attorney argued that the new limitation added by amendment was not taught by the cited references as follows (App.E72):

"That is, these claims have been amended to recite that blanks are being fed to the stack while the top portion of the stack is being removed by the pusher plate. This is accomplished by mounting the pusher plate for a limited vertical movement relative to the means for supporting the pusher plate. This limitation is not taught or suggested by any of the references cited during the course of prosecution."

Thus it is clear that the amendment was added to obtain an allowance over the cited prior art. It is equally clear that S & S by amendment voluntarily "gave up" a claim to understackers which do not have a plurality of blanks accumulating beneath in a rising stack under a vertically moving pusher plate which is removing the top of the stack.

Brief Description of
Koppers' Universal Understackers

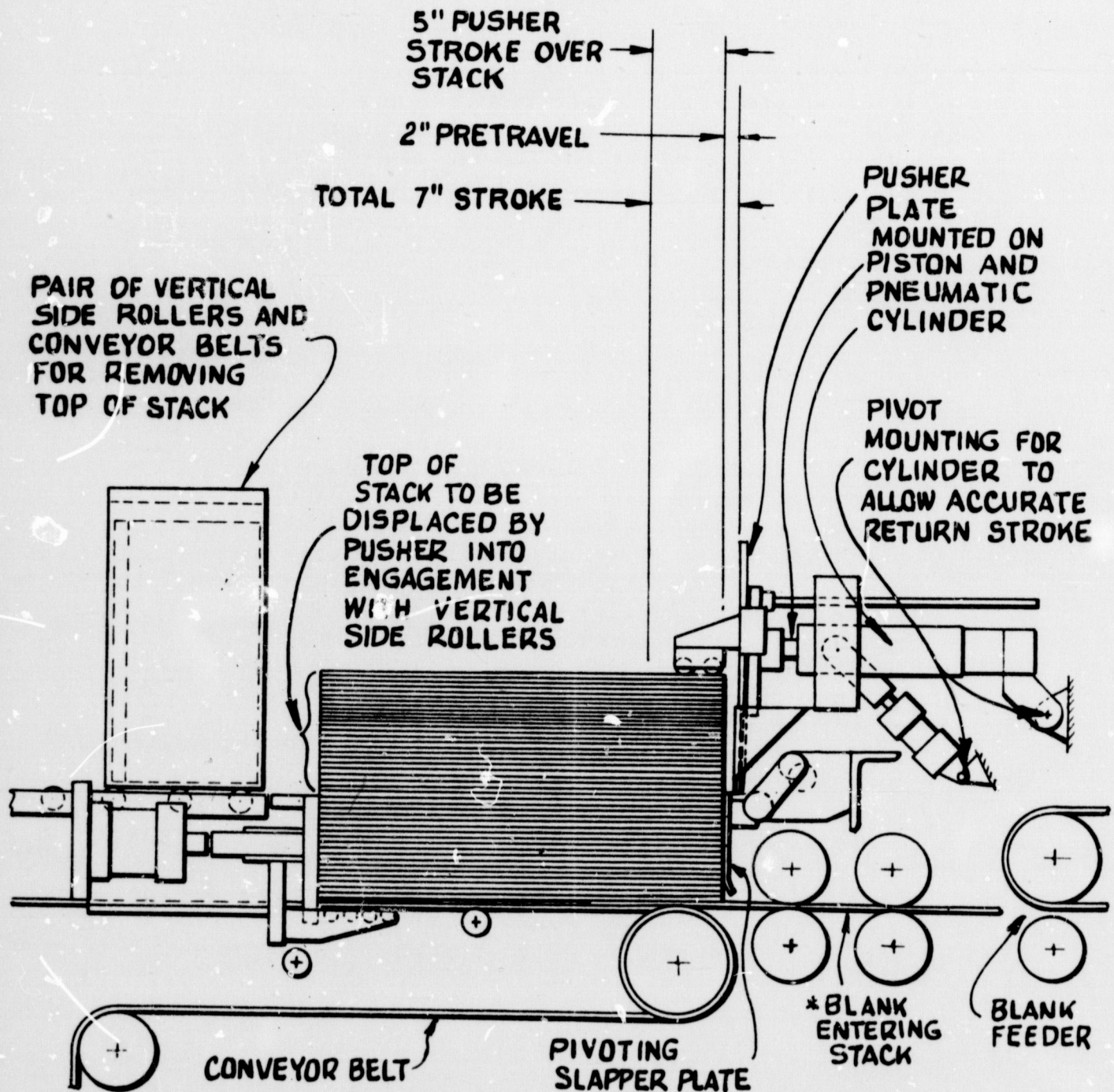
All of Koppers' understackers including its single prototype model and its production devices have a pneumatically operated pusher plate mounted on a piston and cylinder mechanism that displaces the top portion of the stack by a rapid short stroke extending only a short distance of 5 inches over the underlying stack (App.93a-94a, 102a, 103a, 193a, 207a, 209a, 211a, 274a). The pusher plate mounted on a piston and cylinder is illustrated in the drawing of a Koppers understacker reproduced on the left side of this page. The Koppers pusher plate takes about one-fifth ($1/5$) of a second to complete its short 5 inch stroke (App.325a, 326a).

The blanks are fed individually into the Koppers understackers by a blank feeder illustrated on the right hand side of the drawing. Before the blanks enter the understacker they pass a photoelectric counting device. When a predetermined count is reached, an electrical pulse causes the rapid short stroke pusher to displace the top portion of the stack (App.92a-94a, 215a).

When the pusher displaces the top of the stack 5 inches to the left, the end of the top of the stack opposite the pusher is moved into engagement with sets of side rollers and opposed

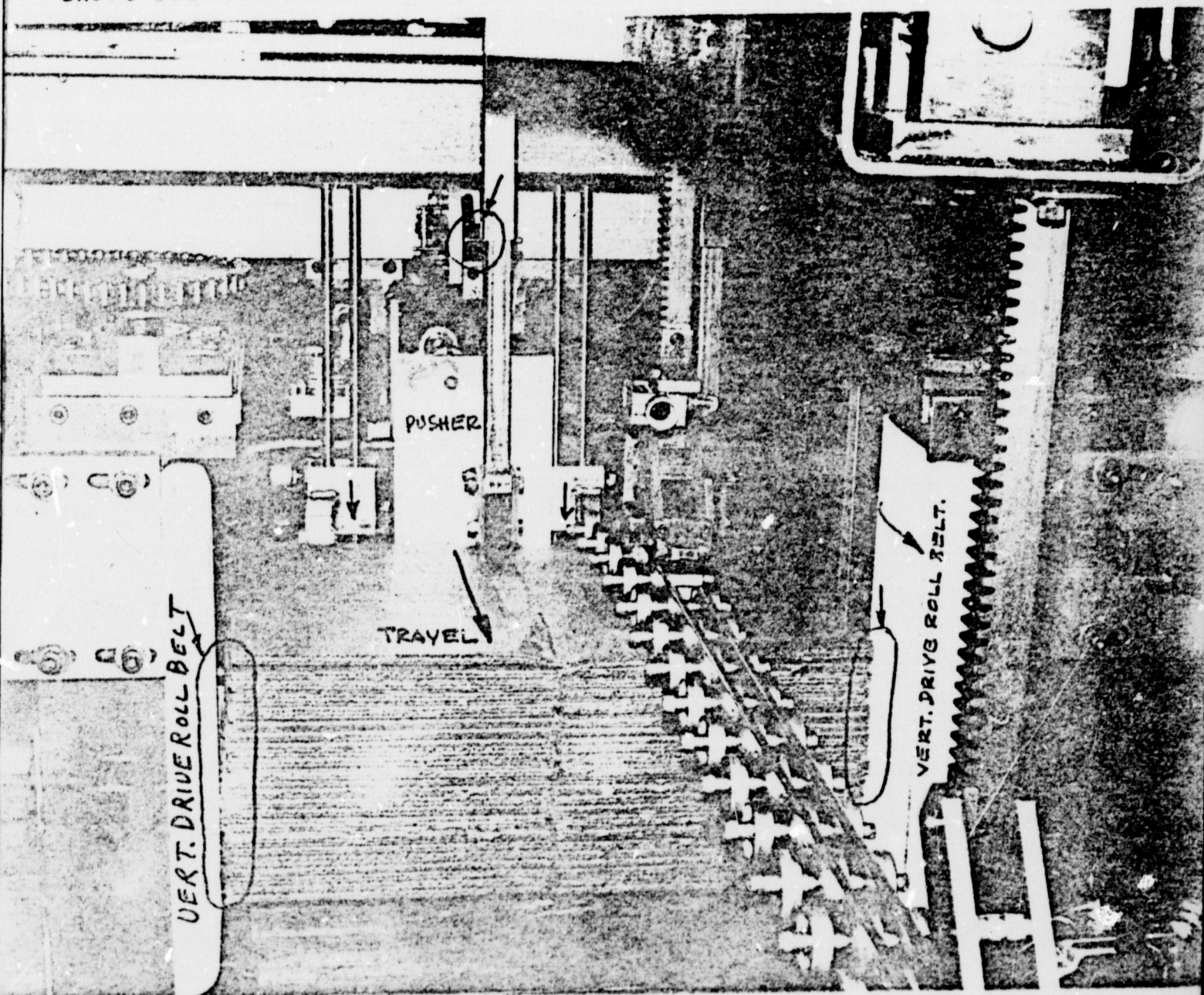
(PX-5, APP.E - 146)

KOPPERS' UNDERFEED STACKER



* Koppers' understackers do not have an underfeed of a plurality of blanks during the rapid 5" pusher stroke so there is no rise in the stack (App. 95a, 107a, 191a-192a, 271a-274a, 309a, 318a). In contrast the slow moving S&S pusher which moves the entire length of the blanks from left to right allows approximately 9 blanks to accumulate causing a rise in the stack (App. 60a, 266a, 271a).

5; STACK STARTING TO BE EJECTED. (EXIT END VIEW)
SHOWS EJECTED STACK BEING ENGAGED WITH VERTICAL DRIVE ROLL BELTS (BOTH S



vertical conveyor belts spaced apart adjacent to the left hand side of the stack. All the Koppers understackers have the pair of vertical side rollers and conveyor belts which effect the removal of the top portion of the stack. without the side rollers and vertical conveyor belts, the top portion of the stack would "stop dead" and there would be no way for the top of the stack to be removed and there would be a "tremendous jam-up" (App.94a, 100a, 102a-103a, 107a, 209a-213a, 264a-274a).

The photograph (App.E15) reproduced on the left hand side of this page shows a Koppers understacker with the top of the stack being engaged by the pair of opposed vertical side rollers as the pusher is completing its short and rapid 5 inch stroke. Another photograph introduced into evidence at the trial (App.E17) shows the same Koppers understacker with the vertical side roller completing the removal of the top of the stack from the understacker.

None of Koppers' Understackers Has Box Blank Accumulation
Beneath A Stack Under A Moving Pusher Or A Pusher That Moves
Vertically Due To Box Blank Accumulation

Koppers' understackers do not have an underfeed of box blanks under a rising stack beneath a moving pusher plate or a pusher plate that moves vertically due to a rise in the stack caused by blank accumulation (App.95a, 107a, 191a, 192a, 271a-274a, 309a, 318a, E117, E120-1). The record is void of evidence proving that there is an accumulation of a plurality of blanks under the pusher plate of any Koppers understacker during the one-fifth of a second it takes the pusher plate to move through its 5 inch forward stroke over the stack of box blanks underneath. Because there is no rising stack caused by blank accumulation during the one fifth of a second for the inch stroke there is no vertical movement of the pusher plate.

Therefore S & S is prevented by the well established Doctrine of File Wrapper Estoppel from claiming that Koppers infringes the patent by attempting to recapture subject matter it voluntarily "gave up" by amending Claim 1 to obtain its allowance.

In Addition To File Wrapper Estoppel There Is No Infringement
Because The Prior Art Limits The Scope Of The Claim And There
Is No Identity Of Structure, Function And Operational Means
Between The Claimed Subject Matter And Koppers' Accused Devices

There is no infringement of Claim 1 because Koppers' understackers have substantial differences in structure, function

and operational means. S & S relies on end result to prove infringement but end result is not enough. S & S also relies on Claim 1 having an unusually broad range of equivalents to prove infringement. However this S & S position is untenable as the prior art clearly limits the scope of the claim of the S & S patent and prevents a finding of equivalence where the differences between the subject matter required by Claim 1 and Koppers' Understackers include the following:

Difference 1 - Koppers' Side Rollers
"Remove" Top Of Stack

None of Koppers' devices uses the pusher plate to remove the top of the stack as required by the specific limitations of Claim 1 but instead all the Koppers devices use the 5 inch stroke of the pusher to move the top of the stack into contact with vertical side rollers which then remove the top of the stack (App.94a, 100a, 102a, 103a, 209a-213a, 264a-274a).

Difference 2 - Koppers' Devices Use A Piston And
Cylinder Support And Not The Claimed
Double Bicycle Chain Support Means

None of Koppers' devices uses the claimed pusher support "means" which 35 U.S.C. §112 requires to be construed to cover the S & S double bicycle chain or its equivalent. But, in contrast, all of Koppers' devices use a pneumatic piston and cylinder device well-known in the prior art which operates in a completely different manner (App.92a, 102a, 103a, 201a-203a,

209a, 210a, 271a, 272a, 275a, 276a, App.E, Ref. 23).

Difference 3 - Koppers' Pusher Plate Operates
Intermittently And Not Periodically

None of Koppers' devices has a continuously moving pusher plate that operates "periodically," as specifically required by Claim 1, but, in contrast all the Koppers devices have a pusher plate that is normally stationary and operates "intermittently" as taught by the prior art (App.58a, 264a, 265a, 267a-270a, App.E, Tab 17).

Difference 4 - Koppers' Slapper Plates Pivot
And Do Not Reciprocate

None of Koppers' devices has a slapper plate which is reciprocally movable in a longitudinal direction as specifically required by an amendment to Claim 1, but, in contrast, all the Koppers devices have a slapper plate that pivots in a manner well-known in the prior art (App. 256a, 257a, 261a, 262a, App.E, Tab 7).

Difference 5 - Koppers' Devices Do Not Have
Blank Accumulation With
Vertical Pusher Movement

None of Koppers' devices has a pusher plate that is mounted for vertical movement and which moves upwardly as blanks are fed and accumulate under a rising stack beneath a moving pusher plate which is removing the top of the stack as specifically

The Claim At Issue

The subject matter of Claim 1 of the suit patent is shown in Figure 1 of the drawings, reproduced on the left side of this page with element identification added for convenient reference. Claim 1 of the suit patent, broken down into elements reads as follows:

"A stacking, straightening and delivery mechanism adapted for use with a machine for operating on box blanks, comprising,

(Element 1 - an understacker conveyor 37 and two plates 20 and 57)

"a conveyor operable in synchronism with the said machine to move said blanks in a first, or longitudinal, direction, a device above the conveyor to intercept and accumulate blanks issuing from the machine thereby forming a blank stack being fed from below, said device including a pair of plates transverse to the direction of motion of the blanks between which the blanks between which the blanks (sic) may be accumulated;

(Element 2 - one of the plates (20) is a slapper)

"one of said plates abutting the trailing edge of the blanks in the stack and being periodically reciprocally movable in a longitudinal direction to apply a straightening force to the blanks; an opening under said plate sufficient to permit the entry of at least one blank at a time,

(Element 3 - a top pusher plate 92 with a double bicycle chain 86 and 87 holding it in a vertical position)

"and above the upper end of said plates, a longitudinally movable plate for periodically pushing a top portion of the stack of said blanks from the said accumulating device and means for supporting the said pusher plate so that it remains in a substantially vertical position when in contact with the said blank stack,

(Element 4 - top pusher plate 92 is slideably mounted on support plate 90 for vertical movement as stack 32 rises)

"said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate, said stack being fed with blanks as the movable plate is removing said top portion from the stack." (Emphasis supplied)

required by Claim 1 (App.95a, 107a, 191a, 192a, 271a-274a, 309a, 318a, E117, E120-1).

With reference to Koppers' production devices, which includes all Koppers' devices except for the one (1) prototype device, there is no infringement for an additional reason, namely:

Difference 6 - Koppers' Production Devices Lack
A Complete Element Required By The
Claim For A Combination Of Elements

None of Koppers' production devices has a supporting plate element upon which the pusher plate is mounted for limited vertical movement. The claim refers to a "means for supporting the pusher plate" and the patent specification in suit discloses a pusher plate 92 slideably mounted for vertical movement relative to a support plate 90. Thus the claim requires that the pusher move vertically relative to its support. In contrast, all of Koppers' production devices have a pusher plate rigidly mounted on a piston and there is no vertical movement between the pusher plate and the piston so that a complete element of the combination claim is not present (App.102a, 103a, 106a, 107a, 189a, 190a, 201a-203a, 209a, 210a, 271-273a).

V. A. GUMENT

Claim 1 Is For An Obvious Combination Of Old Elements

The following pages show in detail that the claim at issue is for an obvious combination of the prior art Greenwood understacker to which an old slapper and an old top pusher have been added.

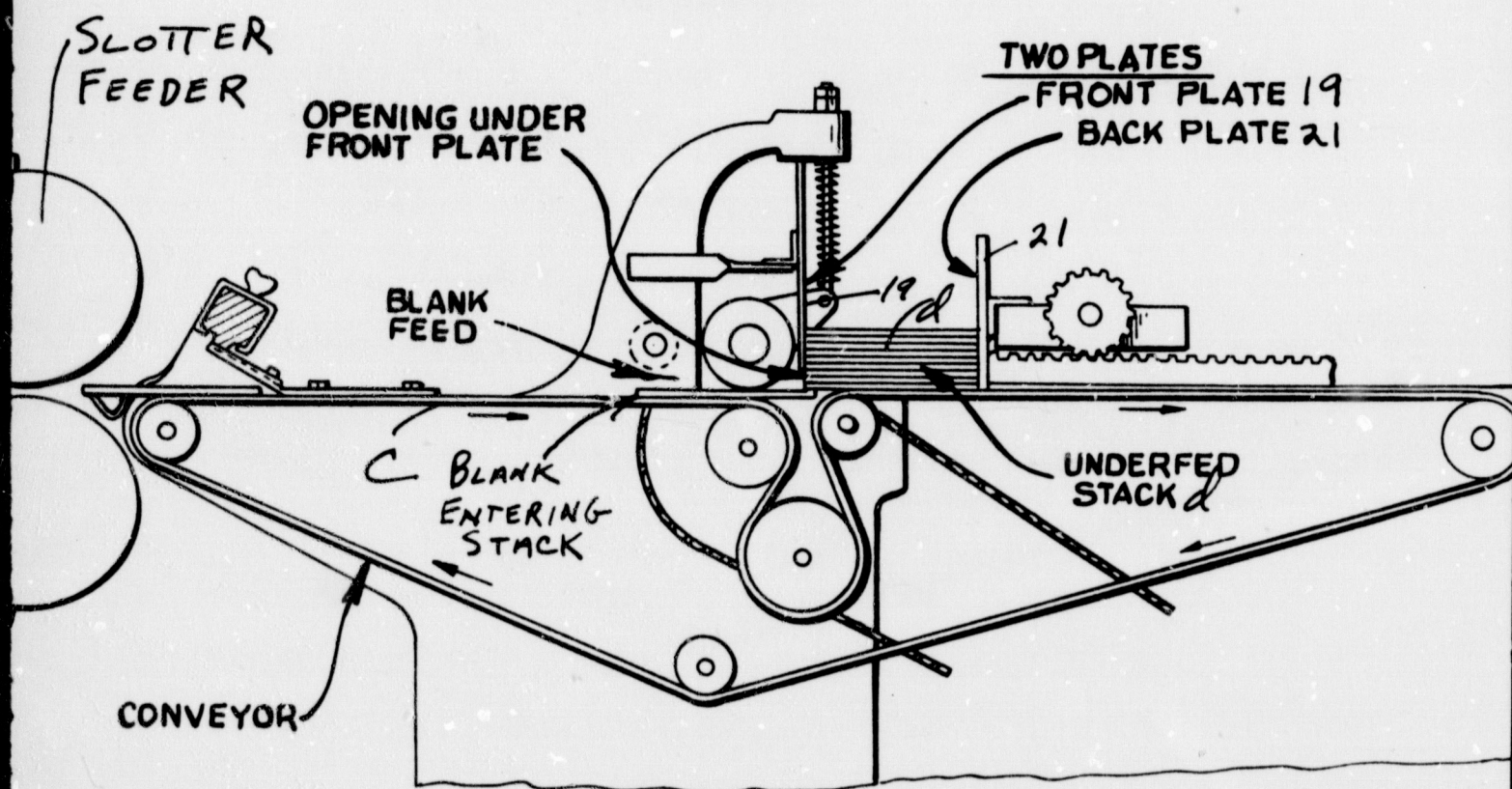
(APP. E, REF. 8)

BASIC UNDERSTACKER OF S&S PATENT IS OLD!

July 19, 1932

H.B. GREENWOOD
STACKER FOR BOX BLANKS
Filed Aug. 27, 1930

1,868,384



June 13, 1961

A. F. SHIELDS

2,988,236

BLANK STACKING, STRAIGHTENING AND DELIVERY DEVICE

Filed Dec. 4, 1956

2 Sheets-Sheet 1

ELEMENT 3 - PUSHER PLATE (92)
WITH DOUBLE BICYCLE CHAIN
SUPPORT (86 & 87)

ELEMENT 4 - SLIDE MOUNTING
PLATE (90) FOR PUSHER (92)
FOR VERTICAL MOVEMENT
AS STACK (32) RISES

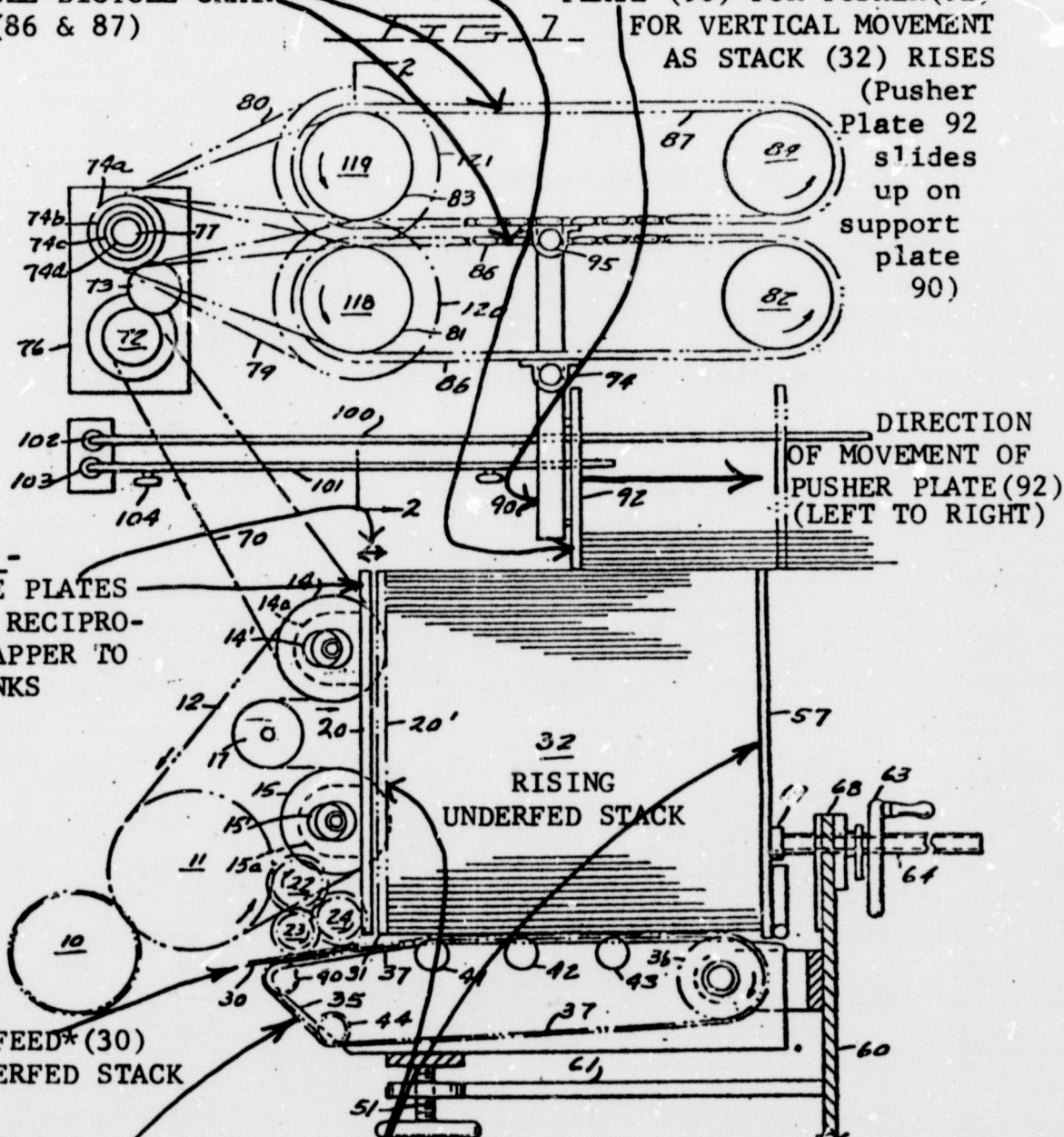
(Pusher
Plate 92
slides
up on
support
plate
90)

ELEMENT 2 -
ONE OF THE PLATES
(20) IS A RECIPRO-
CATING SLAPPER TO
ALIGN BLANKS

BLANK FEED*(30)
TO UNDERFED STACK

ELEMENT 1 -
UNDERSTACKER CONVEY AND TWO PLATES (20 & 57)

*DURING NORMAL OPERATION OF THE S & S
UNDERSTACKER ABOUT NINE(9) BLANKS 30 ARE FED
UNDER THE STACK 32 DURING THE TIME IT TAKES
THE PUSHER 92 TO MOVE FROM PLATE 20 ON LEFT
PAST PLATE 57 ON RIGHT (App.60a, 266a, 271a).



INVENTOR
ALBERT F. SHIELDS

BY *Albert F. Shields*
Robert E. Soffen
ATTORNEYS

All of the Structure and Function of Element 2
of the Combination Claim in Suit is Old

Element 2 of the combination Claim 1 requires the old and well-known provision of a plate or slapper for aligning a stack of blanks. An opening under the slapper permits the entry of at least one blank at a time. As illustrated in the patent drawing on the left, the prior art patent to Taylor (App.E, Ref. 3) shows a slapper plate 16 which is reciprocally movable in a longitudinal direction for applying a straightening force to a blank stack. In addition, as is illustrated in the patent drawing on the left, the prior art Evans patent (App. E, Ref. 7) discloses a slapper 22 mounted for periodic pivotal movement for straightening a pile of blanks. There is an opening under the slapper (22). Thus, the prior art discloses all of the structure and function of Element 2 of the combination which reads as follows:

(Element 2 - a slapper)

"*** one of the said plates (16) abutting the trailing edge of the blanks in the stack and being periodically reciprocally movable in a longitudinal direction to apply a straightening force to the blanks; an opening under said plate sufficient to permit the entry of at least one blank at a time,***" (Emphasis supplied)

At the trial S & S tried to claim that the slapper was for straightening glue flaps, even though the claim is not so limited and the patent specification states that the device is useful for unfolded boxes (App. E3, Column 1, lines 61 - 62) which do not have glue flaps. However it turned out that even this function was old as the uncited Spiess patent (App. E., Ref. 16) not considered by the Patent Examiner teaches that it was known to use a slapper prior to the time the glue flap has set to straighten the blanks (App. 67a-71a).

BASIC UNDERSTACKER OF S & S PATENT IS OLD!

All of the Structure and Function of Element 1 of the Combination Claim in Suit is Disclosed in the Prior Art Greenwood Patent

Element 1 of Claim 1 requires an understacker conveyor and two plates between which the blanks are accumulated. As shown by the patent drawing on the left, which has been marked for convenient reference, the prior art Greenwood patent (App.E, Ref.8) discloses a conveyor C that underfeeds a stack of blanks d which are held in an accumulating device formed by two plates 19 and 21. Thus the prior art discloses all of the structure and function of Element 1 of the combination which reads as follows:

(Element 1 - an understacker having a conveyor and two plates)

"***a conveyor (C) operable in synchronism with the said machine to move said blanks in a first, or longitudinal, direction, a device above the conveyor to intercept and accumulate blanks issuing from the machine thereby forming a blank stack (d) being fed from below, said device including a pair of plates (19) and (21) transverse to the direction of motion of the blanks between which the blanks between which the blanks (sic) may be accumulated,***"(Emphasis supplied)

Understackers which have conveyors to underfeed blanks into a stack were well-known as shown by the prior art patent to Ward, Figure 15 (App. E, Ref. 19).

Thus, the basic understacker claimed in the patent is old, and the statement at page 8 of the S & S brief that the patented device is a "radical departure" from the prior art is an overstatement. The S & S argument at pages 6-9 and 25-27 of its brief attempts to direct the Court into considering that the right angle stacker is the pertinent prior art stacker in order to avoid the thrust of the Greenwood disclosure and the fact that the basic understacker claimed in the S & S patent is old.

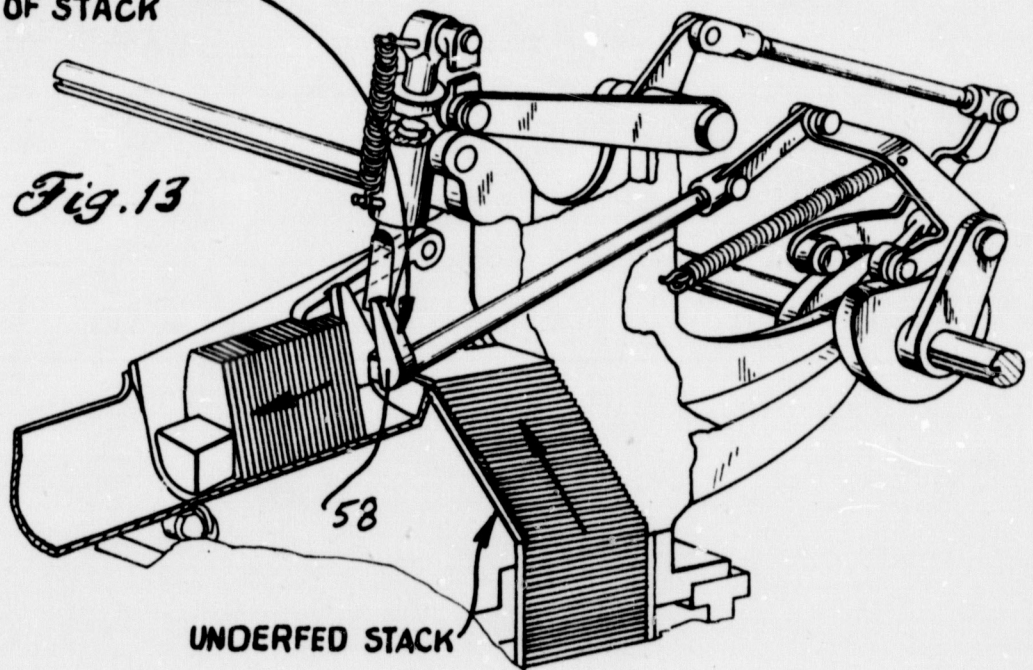
F. V. HART
STACKING MECHANISM
APPLICATION FILED SEPT. 14, 1917

1,344,034

Patented June 22, 1920

PUSHER REMOVING
TOP OF STACK

Fig. 13



DOUBLE BICYCLE CHAIN
OF FIG. 1 OF PATENT
IN SUIT

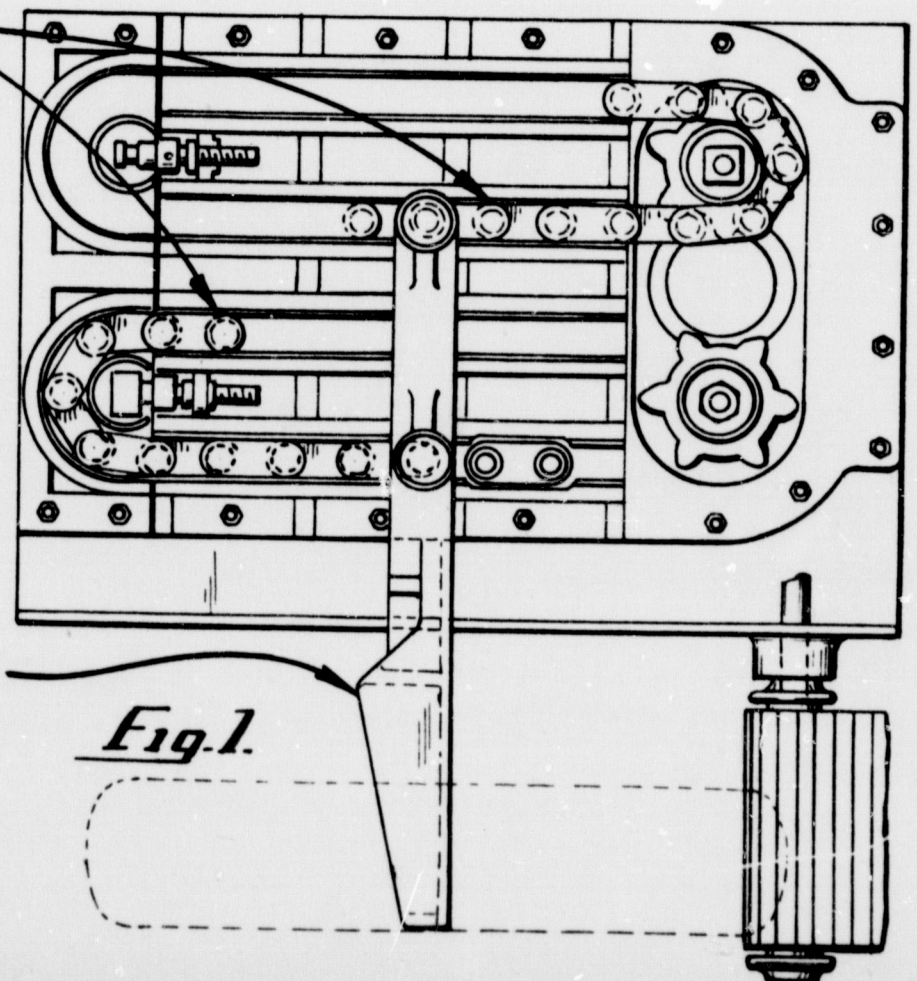
J. SHEPPARD
MECHANICAL LOADER FOR LOOSE MATERIALS
Filed Feb. 9, 1938

2,135,773

Nov. 8, 1938

PUSHER
PLATE

Fig. 1.



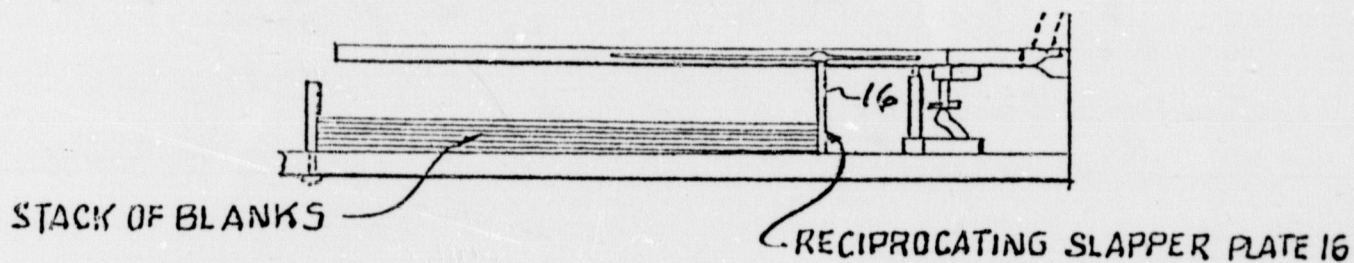
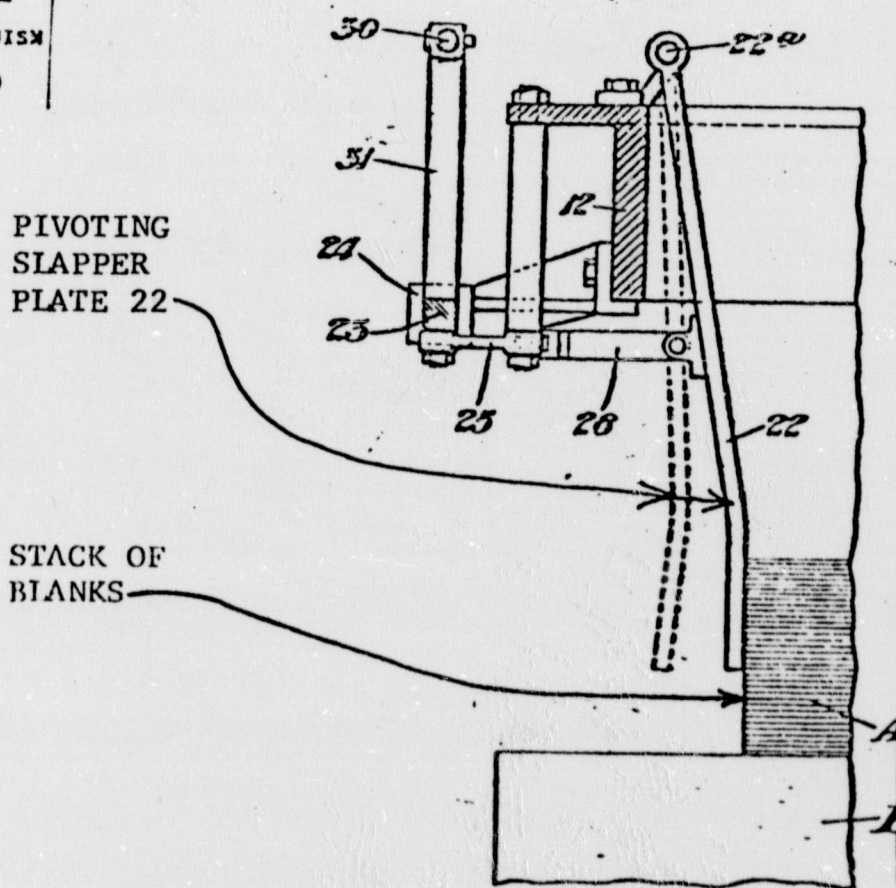


Fig. 4.



A. D. EVANS ET AL
SHEET HANDLING MECHANISM
Filed July 22, 1929

June 28, 1932

1,865,308

3 Sheets-Sheet 3

All of the Structure and Function of Element 3
of the Combination Claim in Suit is Old

Element 3 of the combination Claim 1 requires the old construction of a pusher for removing the top of an underfed blank stack. The prior art patent to Hart (App.E, Ref.4) as illustrated in the patent drawing on the left, shows an underfed stacker having a movable pusher 58 for removing the top portion of an underfed stack. The patent to Sheppard (App.E, Ref. 9), as shown in the patent drawing on the left, illustrates the same double bicycle chain mechanism for vertically supporting the pusher as shown in Figure 1 of the suit patent. The Trial Court Memorandum of 1-8-74 (App.3a) amended the decision dated 11-28-73 to recite the fact that the Sheppard patent was cited by the Patent Office. Thus, the prior art discloses all of the structure and function of combination Element 3 which reads as follows:

(Element 3 - a top pusher for an underfed stack having a double bicycle chain support to hold it in a vertical position)

"***and above the upper end of said plates a longitudinally movable plate for periodically pushing a top portion of the stack of said blanks from the said accumulating device and means for supporting the said pusher plate so that it remains in a substantially vertical position when in contact with said blank stack,***"

At this point, the Patent Examiner, in rejecting for the third time the claim to an old Greenwood understacker provided with an old slapper and old top pusher, concluded (App.E58)

"***these expedients would be within the skill of the average mechanic and would not produce any new or unobvious results."

The only limited point of alleged novelty found by the Patent

Examiner and added as a limiting amendment to get the claim allowed was "a pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate" (App. E68, E70, E72). This claimed structure functions to allow the pusher plate to slide upwardly on its support plate as the underlying surface rises.

All of the Structure and Function of Combination Claim
of Element 4 Requiring a Pusher Mounted To Slide
Upwardly As the Surface Beneath the Pusher
Rises Is Disclosed in the Prior Art

When the Patent Examiner finally allowed Claim 1, he did not have before him prior art disclosing a pusher that slides up on a supporting plate as the surface under the pusher rises. However by uncontradicted testimony at the trial it was proven that pusher plates mounted for limited vertical movement relative to a support for the pusher plate as the surface beneath the pusher plate rises were a well-known obvious expedient (App. 281a).

In addition, prior art patents (App. E, Ref. 14 and 15) not before the Patent Examiner disclose pusher plates that are mounted to slide up on supporting plates as the surface under the pusher plate rises. For instance, as illustrated in the patent drawing on the left, prior art patent to Crank (App.E, Ref. 14) illustrates a pusher plate 28 which is slideably mounted to move vertically up and down on a support plate 26 in order to allow the pusher plate to move up as the surface beneath the pusher plate rises as the pusher moves from D on the left to E on the right.

Aug. 19, 1952

(APP. E REF. 14)

H.R. CRANK

2,607,283

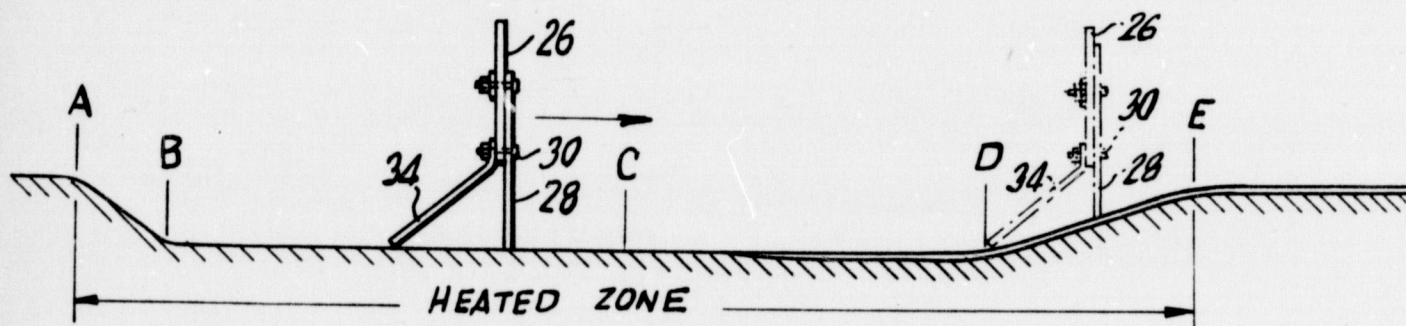


Fig. 4

Similarly, the prior art patent to Kottmann (App. E, Ref. 15) discloses a pusher plate 24 slideably mounted on supports 14 and 28 for limited vertical movement as the surface beneath the pusher plate 24 rises. At the trial S & S did not contest the evidence presented by oral testimony and prior art patents proving it was an obvious well-known expedient to slideably mount a pusher plate on a support plate to allow the pusher plate to move vertically to accommodate a rise in the surface under the pusher plate. Thus, the prior art discloses all the structure and function of Element 4 of the combination as follows:

(Element 4 - slide mounting for pusher to allow vertical movement)

"*** said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate, said stack being fed with blanks as the movable plate is removing said top portion from the stack."

Accordingly, all of the structure recited in Claim 1 of the patent in suit is disclosed in the prior art, and the structural elements of Claim 1 function in the same manner as they do in the prior art (App. 283a). The only difference between the subject matter of Claim 1 and the prior art is that four well-known elements have been combined in a single device wherein the elements function in the same manner as was known in the prior art and produce the same expected results. Although there may be novelty in the fact that these four elements of Claim 1 have not been

put together before, novelty is not enough and may not be equated with non-obviousness.

The requirement for non-obviousness was emphasized in Lemelson v. Topper Corporation, 450 F.2d 845 (2nd Cir., 1971) wherein the Court stated: (p. 848)

"Our disagreement with the court below on the issue of invalidity stems from our conclusion that that (sic) court did not apply the rather rigorous standard of nonobviousness mandated by section 103, Graham and Great Atlantic & Pacific. There may have been novelty in the creation of Lemelson's gun, but novelty is not to be equated with nonobviousness."

To paraphrase a part of the quote above from this Court's ruling in the Lemelson case, supra,

There may be novelty in the creation of S & S's underfeed stacker, but novelty is not to be equated with non-obviousness.

The combination of the four mechanical elements of Claim 1 does not create any surprising or unexpected results. The patentee has merely brought together segments of prior art and claims them in congregation as a monopoly. As in A & P Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147 (1950), when all the elements of Claim 1 are totaled, the results are the same:

"Two and two have been added together, and still make only four." (340 U.S. at 152)

Claim 1 is invalid because of obviousness under 35 U.S.C. §103.

The Trial Court's Invalidity Holding Is Buttressed
By The Fact That The Level of Ordinary Skill In
The Pertinent Art Was High

The trial Court in reaching its conclusion that the patent is invalid for obviousness found that the level of ordinary skill in the pertinent art was high as follows (App. 614a):

"The evidence concerning the level of the ordinary skill of a person in the art of designing and constructing machinery for handling box blanks shows that it is quite high. *** Consequently, in view of the disclosures found in the prior art and the high level of skill in the art of designing and constructing machinery for the handling of box blanks the court concludes that defendant's device was not a patentable combination of elements."

The trial record clearly supports the finding that the level of the ordinary skill of persons in the art of designing and constructing machinery for handling box blanks is high, as shown by evidence indicating high technical competence and experience of skilled persons working in this area. Persons skilled in the art of designing and constructing machines for handling box blanks include the following:

1. Mr. Albert Shields, the named patentee of the patent in suit, has an M.E. and M.S. Degree from Stevens Institute, and has a Doctorate in Engineering from the Technical University of West Berlin, and has been working in the pertinent art since 1936 (App. E122 - E123).

2. Mr. Lehman, S & S's technical expert at the trial, has a Bachelors Degree in Mechanical Engineering from R. P. I. and has a Masters Degree in Industrial Engineering from Columbia

University (App.353a-354a).

3. Mr. Theodore Ley, an officer of Universal, received a degree in Mechanical Engineering from Columbia University in 1936, and has been working in the pertinent art since that time (App.E118).

4. Mr. John Lopez, the former Chief Engineer for Universal, has taken courses in Engineering, and has 35 years of experience as a machine designer (App. E119 - E120).

5. Mr. Mitchel Flaum, President of S & S, has an Engineering Degree from Lafayette College (App. E113).

6. Mr. William Pulda is a graduate of Rutgers University and has a Certificate in Mechanical Engineering. He has been working in the pertinent art since 1955 (App. 85a).

7. Mr. Christopher Palli, the present Chief Engineer for Universal, has a B.S. in Mechanical Aero Engineering from Pacific Coast University, and has a background in the material handling arts (App. 199a-200a).

Surely these skilled engineers in the art of designing equipment for handling box blanks are expected to be aware of elementary mechanical mechanisms and to look to the relevant prior art in the material handling field in general for solutions to their routine problems. The fact that the pertinent art includes the material handling field in general is confirmed by the fact that the Patent Office Examiner cited sixteen pertinent prior art references which

relate to the material handling field in general. These prior art references cited by the Examiner disclose devices for handling many different types of materials and are not restricted to the narrow field of handling box blanks as shown by the File History (App.E18) and Koppers' book of prior art patents (App.E, with cited references). Thus, a man of ordinary skill in the art of designing machines for handling box blanks is expected to look to other pertinent arts in the problem solving process. See Burgess Cellulose Company v. Wood Flong Corp., 431 F.2d 505, 509 (2nd Cir., 1970).

In Mueller Brass Co. v. Reading Industries, 352 F.Supp. 1357 (E.D.Pa. 1972) affirmed 487 F.2d 1395 (3d Cir., 1973) the Court stated at 352 F.Supp. 1368:

"***But in judging the 'ordinary level of skill' in the art, it is the level of skill of those who normally attack the problems of the art that counts, and those who do most of the problem solving in tube-making research and development are graduate engineers. As such they are chargeable with certain general knowledge concerning the principles of engineering, outside the narrow field of tube-making, and with the skills, ingenuity and competence of the average professional engineer."
(Emphasis supplied)

See also Metaframe Corp. v. Biozonics Corp., 352 F.Supp. 1006, 1014-15 (D. Mass., 1972).

In view of the fact that persons in the pertinent art were highly skilled and were chargeable with engineering knowledge outside their field, the trial Court was justified in concluding (App.615a):

"Finally, the Crank and Kottman patents, which were not cited by the Examiner, disclose mechanisms that employ pusher plates that are vertically movable on their support plates in order to allow the pusher plate to move up or down in relation to its underlying surface as it moves in a relatively longitudinal direction. Although these patents were issued for a mechanism used in popping corn and a mechanism used to convey loaves of bread through a cutting machine, they are relevant to the invention in question in that they show that the structure of defendant's 'novel' pusher plate was commonly used in other fields. This evidence is important in light of the uncontroverted testimony of plaintiffs' expert witness that 'the idea of using one plate in front of another plate loosely is a well known obvious expedient.' Trial transcript at 257.

It is settled law that

where the use of a device or structure is common to many dissimilar fields, its application to a new field ordinarily involves no more than ordinary mechanical skill. Welsh Mfg. Co. v. Sunware Products Co., 236 F.2d 225, 226 (2d Cir., 1956).

Secondary Considerations Re The Obviousness
Of Claim 1

The record is devoid of substantial evidence that there was a long-felt but unresolved need for the claimed subject matter of

the patent in suit. The record is equally devoid of substantial evidence of the failure of others to develop the subject matter set out in combination Claim 1.

S & S had the burden of proving commercial success. However, S & S has failed to make its proof. The record is devoid of any evidence showing that third parties have made requests for, or have been licensed under the patent in suit. At the trial, S & S failed to prove that its own understacking devices sold to others come within the claims of the suit patent. S & S's witness, Mr. Lehman, testified that S & S has sold understacking devices (App. 453a), but was unable to tell the Court that S & S's commercial machines have pusher plates of the type claimed in the patent in suit (App. 461a - 467a).

In addition, assuming, arguendo, that S & S's commercial devices come within the scope of Claim 1 of the patent in suit, S & S has failed to prove that customers purchased the devices in order to obtain a device that embodies the subject matter of Claim 1 and not to obtain a device with the spiral lifting mechanisms covered by another S & S patent not in suit (App. E85). All of the understacking devices sold by S & S have spiral lifting mechanisms (App. 468a, 469a) of the type shown in Figure 2 of another S & S patent (App. 467a, App.E85). In addition, all the S & S understackers sold were improperly tied to large folder gluers not

covered by the patent in suit (App. 455a, 474a - 476a, App. E115, E116). Accordingly, there is no substantial evidence proving that the reason the customers purchased S & S's devices was to obtain devices embodying the subject matter of the patent in suit rather than to obtain devices with the spiral lifting mechanisms having the advantages claimed in another United States patent or to obtain S & S folder gluers.

The rule that S & S had to prove that the claimed subject matter in the suit patent contributed to the alleged commercial success of its devices is set out in Welsh Manufacturing Co. v. Sunware Products Co., 236 F.2d 225 (2nd Cir.1956) where the court stated at 227:

"***Nor does the alleged commercial success of the device aid the plaintiff. Although many sun glasses embodying the plaintiff's structure have been sold, there is no evidence of the extent, if any, to which the new structure contributed to those sales.***"

See also Lorenz v. F. W. Woolworth Co., 305 F.2d 102, 104 (2nd Cir. 1962); Wilson Athletic Goods Mfg. Co. v. Kennedy Sporting Goods Mfg. Co., Inc., 233 F.2d 280, 284 (2nd Cir.1956).

And finally, in view of the fact that the obviousness of the claimed subject is clear, the issue of commercial success is irrelevant and is discussed here only for completeness. This rule is set out in Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147 (1950) when the Court stated at 153:

"But commercial success without invention will not make patentability."

See also Anderson's Black Rock, Inc. v. Pavement Salvage Co., Inc., 396 U.S. 57, 61 (1969); Rains v. Nlaqua, 406 F.2d 275 (2nd Cir. 1969); Continental Can Co. v. Old Dominion Box Co., 393 F.2d 321 (2nd Cir. 1968).

The Presumption of Patent Validity Is Severely Undercut By Uncited Pertinent Prior Art

The statutory presumption of validity is severely undercut when the Patent Office fails to cite the pertinent art during the prosecution of the patent application, i.e., the Spiess Patent (App.E, Ref. 16) disclosing a glue setting slapper, and the Crank and Kottman patents (App.E, Ref. 14 and 15) which disclose slideably mounted pusher plates. Reeves Brothers, Inc. v. U.S. Laminating Corp., 417 F.2d 869, 872 (2nd Cir. 1969). At page 25 of its brief, S & S states that the uncited Spiess Patent is the most pertinent prior art, but does not explain why S & S did not tell the Patent Office about these pertinent right angle machines which S & S knew about prior to the ex parte prosecution of the Application for the patent in suit (App. 403a - 406a).

Accordingly, the rule to be applied here is set out in Lorenz v. F. W. Woolworth Co., 305 F.2d 102 (2nd Cir. 1962) as follows:

"The statute does not require that the presumption be accorded the weight of actual evidence or that the use of the presumption

should affect a decision of invalidity that would otherwise be reached with confidence. This court has recognized the unavoidable obstacles to an accurate and impartial decision that are inherent in ex parte proceedings in the patent office, Guide v. Desperak, 249 F. 2d 145, 148 (2d Cir.1957). We cannot properly allow decisions of that office to alter the preponderance of the evidence on the question of validity." (Emphasis supplied) (305 F.2d at 105)

The Trial Court Applied The Rules Set Out By
The Supreme Court In The Graham Decision For
Determining Obviousness And Made The Appropriate
Findings To Determine Invalidity

S & S claims at page 16 of its brief that the Trial Court failed to apply "the Graham tests." This statement is not correct!

The Trial Court carefully applied the appropriate tests for obviousness and in its Opinion(App. 611a - 612a) quoted the following tests for obviousness from Graham v. John Deere Co., 383 U.S. 1 (1965):

"Under [35 U.S.C.] §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined."

The Court applied these tests carefully. In determining the content of the prior art the Court stated (App. 614a):

"The court has had the opportunity to study prior art references which were not considered by the Examiner. When these additional references are combined with those cited by the Examiner, it becomes quite clear that the pusher element of defendant's device was likewise an expedient within the skill of the average mechanic."

The Trial Court then went on to discuss in detail the differences in the prior art patents cited (App. 614a - 615a) and resolved the level of the ordinary skill in the pertinent art as follows (App. 614a):

"The evidence concerning the level of the ordinary skill of a person in the art of designing and constructing machinery for handling box blanks shows that it is quite high."

And finally, the Trial Court determined the obviousness of the subject matter against the above background as follows: (App. 615a)

"Consequently, on the basis of the disclosures in the prior art and the evidence showing that the expedients used in defendant's pusher mechanism were commonly used in other fields, the court finds that its invention was anticipated by the prior art and that it would have been obvious to a person having ordinary skill in the art of designing and constructing machinery for handling box blanks."

The Court Below Applied The Severe Test Appropriate
For Invalidating Mechanical Combination Claims
To Obvious Subject Matter

The Trial Court opinion properly treats and recognizes that Claim 1 of the suit patent is a combination of old and well-known mechanical parts or elements. It is precisely the type of combination claim long condemned by the courts because it merely unites elements old in the art with no change in their respective functions. The Supreme Court in Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corporation, 340 U.S. 147 (1950), set out the rule that combination claims must be carefully scrutinized

because of the improbability of finding invention as follows:

(at 152-153)

"Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. *** A patent for a combination which only unites old elements with no change in their respective functions, such as is presented here, obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men."

The fact that S & S's mechanical combination claim which is lacking in any surprising consequences is not patentable follows from the following holding of the Supreme Court in the A & P case, supra, at 152:

"***The conjunction or concert of known elements must contribute something; only when the whole in some way exceeds the sum of its parts is the accumulation of old devices patentable. Elements may, of course, especially in chemistry or electronics, take on some new quality or function from being brought into concert, but this is not a usual result of uniting elements old in mechanics. This case is wanting in any unusual or surprising consequences from the unification of the elements here concerned, and there is nothing to indicate that the lower courts scrutinized the claims in the light of this rather severe test.***" (Emphasis supplied)

A more recent application of this "severe test" by the Supreme Court is found in Anderson's Black Rock, Inc. v. Pavement Salvage Co., Inc., 396 U.S. 57 (1969) where another patent for a combination of old mechanical elements was held invalid.

The requirements for non-obviousness was emphasized in Lemelson v. Topper Corporation, 450 F.2d 845 (2nd Cir.1971)

wherein the Court stated at 848:

"Our disagreement with the court below on the issue of invalidity stems from our conclusion that that (sic) court did not apply the rather rigorous standard of nonobviousness mandated by section 103, Graham and Great Atlantic & Pacific. (Emphasis supplied)

The trial followed the case law of this Circuit, which requires that a combination claim pass a rigorous standard of nonobviousness. See The Taylor Wine Co., Inc. v. Celmer, 397 F.2d 784 (2nd Cir. 1968); Rains v. Niaqua, Inc., 406 F.2d 275 (2nd Cir. 1969); Trimble Products Inc. v. W. T. Grant Co. et al, 404 F.2d 344 (2nd Cir. 1968); Watsco, Inc. v. Henry Valve Co., 404 F.2d 1104 (2nd Cir.1968); Indiana General Corp. v. Krystinel Corp., 421 F.2d 1023 (2nd Cir. 1970); Nelson Planning, Limited v. Tex-O-Graph Corp., 423 F.2d 36 (2nd Cir. 1970); General Radio Co. v. Kepco, Inc., 435 F. 2d 135 (2nd Cir. 1970); Burgess Cellulose Co. v. Wood Flong Corp., 431 F.2d 505 (2nd Cir.1970); Southwest Products Co. v. The Heim Universal Corp., 443 F. 2d 621 (2nd Cir. 1971) and Hubner v. Sunbeam Corporation, 450 F. 2d 878 (2nd Cir. 1971).

VI. ARGUMENT - NON-INFRINGEMENT

THE LAW OF FILE WRAPPER ESTOPPEL BARS S & S FROM CLAIMING THAT KOPPERS UNDERSTACKERS COME WITHIN THE SCOPE OF CLAIM 1 OF THE SUIT PATENT

S & S is estopped by the file history of the patent in suit from successfully claiming that Koppers devices infringe combination Claim 1. In order to obtain an allowance of the suit patent, Claim 1 was amended to overcome the prior art at the requirement of the Examiner. These amendments to Claim 1 estop S & S from successfully claiming that Claim 1 covers Koppers devices.

The law of File Wrapper Estoppel is well established in this circuit. In the International Latex Corp. v. Warner Bros., 276 F. 2d 557 (2nd Cir., 1960) the Court in finding that the claim had been amended prohibited the claim from being given even a modest expansion beyond its literal language and set out the rule as follows, at p. 565:

If the original and final working of Claim 3 had been the same, we would not disagree, for the difference here is surely minor. However, we must look at the patent office history and, when we do, we find that even so modest an expansion of the claim by the doctrine of equivalents is precluded by 'file-wrapper estoppel.' The description of the crotch in allowed claim 3 (originally claim 53) differs from that in rejected claim 45 only in the quoted reference, in the last clause of claim 3, to the crotch area extending below the lower margin of the back. This was a feature not contained in the

Barnes patent the examiner had cited and one which the final letter of applicant's patent solicitor urged 'particularly in its relationship to the other features is clearly novel to the art and important to the success of the invention.' It is settled that the rejection of a claim forbids any interpretation of those secured which leaves them identical with that rejected or any use of the doctrine of equivalents to that end. (Emphasis supplied)

The rule followed in the International Latex case follows doctrine long established by the Supreme Court. In I.T.S. Rubber Co. v. Essex Rubber Co., 272 U.S. 429 (1926), the Court set out this rule as follows, at p. 444:

"***So where an applicant whose claim is rejected on reference to a prior patent, without objection or appeal, voluntarily restricts himself by an amendment of his claim to a specific structure, having thus narrowed his claim in order to obtain a patent, he 'may not by construction, or by resort to the doctrine of equivalents, give to the claim the larger scope which it might have had without the amendments which amount to a disclaimer,' (Emphasis supplied)

History of the Prosecution of the Patent In Suit

The entire file history (App. E18 - E79) of the patent in suit reflects the fact that the Patent Examiner found no invention and that the application was only finally allowed after four (4) rejections when the claims were severely limited to the detailed structure shown in the patent drawings in order to add novelty and avoid the prior art. All the claims were repeatedly rejected on the prior art because (App. E58):

"these expedients would be within the skill of the average mechanic and would not produce any new or unobvious results."

In the final Patent Office rejection dated June 28, 1960, (App. E68) rendered during the prosecution of the application for the suit patent, the Patent Examiner made the following holding in rejecting all the claims in the application for the fourth time:

"***The novelty of the invention appears to reside in the vertically movable pusher plate so that the blanks can continuously accumulate while the pusher plate is removing a top portion of the stack. It is suggested that the word -- accumulating -- be inserted after the word "said" line 16, claim 1. This indicates some functional purpose of the contact of the pusher with the blank stack."
(Emphasis supplied)

In addition, the Examiner held that:

"*** the word -- reciprocally -- is a more appropriate word than "oscillatorily" to define the movement of the plate 20." (Emphasis supplied)

Rather than filing an appeal in order to obtain an allowance of the application, S & S instead voluntarily filed an amendment on August 30, 1960 (App. E69) which amended Claim 1 as required by the Examiner. Thus, in order to overcome the rejection that the claim did not point out and distinctly claim the subject matter of the alleged invention, S & S limited the claim to the specific area of alleged novelty over the prior art. The pertinent narrowing limitations to Claim 1 in Amendment (D) are as follows (App.E69,E70):

"Claim 1, line 5 -- after "machine" please insert -- thereby forming a blank stack being fed from below --

"Claim 1, line 9 - replace "oscillatorily" with -- reciprocally --

"Claim 1, line 16 -- replace period (.) with , said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate, said stock (sic) being fed with blanks as the movable plate is removing said top portion from the stack."
(Emphasis supplied)

In addition, on page 3 of the same Amendment D (App. E71, E72) the S & S attorney submitted the following argument pointing out that after an ex parte interview with the Examiner the above amendments were made to provide limitations not taught by the prior art patents in order to overcome the rejection:

"That is, these claims have been amended to recite that blanks are being fed to the stack while the top portion of the stack is being removed by the pusher plate. This is accomplished by mounting the pusher plate for a limited vertical movement relative to the means for supporting the pusher plate. This limitation is not taught or suggested by any of the references cited during the course of prosecution." (Emphasis supplied)

Therefore, in order to overcome the Examiner's rejection, it is clear that S & S voluntarily narrowed the claim by an amendment to avoid the prior art. It is equally clear that S & S "gave up" the right to claim infringement of devices that do not have:

- a) a pusher plate that has limited vertical movement
relative to the means for supporting the pusher plate
when the stack is fed with blanks as the movable plate

is removing the top portion from the stack.

This portion of the amendment requires that the blanks accumulate under the pusher plate and that the pusher plate has limited vertical movement relative to its support to accomodate the rise in the stack caused by the accumulation of blanks; and

- b) a slapper plate reciprocally movable in a longitudinal direction in the manner of a reciprocating piston of an automobile engine.

(1) Claim 1 is Not Infringed Because None of Koppers' Devices Has A Pusher Plate That Is Mounted For Vertical Movement In Order to Rise Up As Blanks Are Fed and Accumulate Under
A Moving Pusher Plate

Amended Claim 1 requires that a plurality of blanks (more than one) accumulate under the pusher plate while the pusher is moving relatively slowly. Because the S & S pusher moves slowly, the vertical movement is necessary so that the pusher plate can rise as the blanks underneath the pusher accumulate in a pile. The fact that the claim requires an accumulation of a plurality of blanks in a pile under the moving pusher plate is clear from the patent specification which states, at column 3, lines 39-44 (App. E4):

"***Thus, as pusher plate 92 delivers a pile of blanks from the machine, the stack is continuously rising and because of wheels 105a,b,c and d riding the rails 107 and 108 the pusher plate is made to rise on response to the movement of the top of the portion of the stack not being delivered.***" (Emphasis supplied)

The evidence at the trial established that in the normal operation of S & S machines at 200 blanks a minute, approximately nine (9) blanks accumulate in a pile under the slow moving pusher plate which is movable vertically to accomodate the nine (9) blanks rising in the underlying stack (App. 60a, 266a, 271a).

In contrast, the evidence presented at the trial clearly shows that there is no accumulation of blanks under the rapidly moving short stroke pusher plate of any of Koppers' devices including its single prototype, and, accordingly, there is no need for, nor is there any vertical movement of the pusher plate during the forward pushing stroke. The witnesses Messrs. Pulda (App. 95a, 107a, 191a-192a) and Fischer (App. 271a-274a, 309a, 318a) both testified at the trial that there was no feed of blanks under the pusher of Koppers' single prototype or production models during the pushing stroke. This fact was confirmed by the Depositions Testimony of Mr. Ley (App. E117) and Mr. Lopez (App. E 120-1).

Even the S & S witness, Mr. Cantor, admitted on cross-examination that he had never seen an accumulation of blanks under the pusher of Koppers' devices as he never saw more than one blank coming in during one push (App. 596a-597a). In addition, he did not know if the leading edge of the blank he saw coming had passed under the rapidly moving pusher (App. 597a). And finally, Mr. Cantor, a patent attorney, admitted that Claim 1 requires "plural blanks" to be fed underneath the pusher (App. 582a).

Thus, the record is clear in showing that none of the Koppers production devices or its single prototype device has a pusher plate that moves vertically during the forward pushing stroke as the extremely rapid short stroke of the pneumatically operated pusher is completed in a fifth of a second prior to any accumulation of blanks (App.95a, 107a, 191a-192a, 271a-272a, 273a-274a, 309a, 318a, 325a).

Koppers' single prototype model had a pusher plate which could be moved vertically (App.94a, 74a), however, it did not function in the manner required by the amended portion of Claim 1 because there was no accumulation of blanks under the pusher plate during the rapid short forward pushing stroke to cause the pusher plate to move vertically (App.95a, 273a-274a). In addition, Koppers' single prototype device has a pusher plate that only displaces the top portion of the stack by a rapid short stroke extending only a short 5" distance over the stack and does not remove the "top portion from the stack," as required by the amended portion of Claim 1, as the side rollers of the prototype device actually remove the top portion of the stack (App.94a, 273a-274a). There is no evidence in the record of any S & S witness inspecting the Koppers' prototype device while in operation, much less proof that there was an underfeed of a plurality of blanks.

In order to remove deficiencies in Koppers' single prototype device, which was out of operation at the time of the trial, the first Koppers' production models were designed with a pivotally mounted pusher air cylinder which had a second cylinder

to move the pusher through an arcuate path on the return stroke, but the pusher remained in a horizontal position on the forward stroke (App. 95a-96a, 102a-103a, 112a-113a, 189a-192a). In Koppers second production models, a cam lift mechanism replaced the second pneumatic cylinder to pivot the pusher arcuately on its return path (App. 203a-207a). Accordingly, there is no vertical movement of the pusher plate in Koppers' production device during the short rapid pushing and on the return stroke the pushers move arcuately and not vertically (App. 271a - 272a).

Therefore, as none of Koppers' devices including the single prototype device has a pusher plate that rises in a vertical direction during the pushing stroke due to a rise in the underlying stack caused by an accumulation of a plurality of blanks being fed into the stack, S & S is estopped by the file history from claiming that Claim 1 is infringed as the patentee gave up this subject matter during the prosecution of the application.

- (2) Claim 1 is Not Infringed By Koppers' Devices Which Do Not Have Slapper Plates That Are Reciprocally Movable in a Longitudinal Direction, But, In Contrast Have Slapper Plates Which Pivot In A Manner Well-Known In the Art
-

The slapper plate 20 of the patent in suit reciprocates in a linear direction and moves from the position of 20 to the position 20¹ as it reciprocates, as shown in Figure 1 (App. E1) of the patent drawings (App.54a). In order to exactly define this reciprocal

motion which is back and forth like a reciprocating piston (App. 262a) and to avoid the cited prior art patents, such as Evans (App. E, Ref. 7) and Link (App. E, Ref. 20, Fig. 9) which disclose pivoting slapper plates which swing back and forth in an arcuate path about a pivot rod, Claim 1 was amended (App. 256 a, 257a, 261a, 262a) so that the slapper is defined as:

"*** being periodically reciprocally
movable in a longitudinal direction."

All of Koppers understackers, including its single prototype device and two production type devices have slapper plates (App. E 145, E 147) that pivot or swing back and forth about a pivot bar and do not move "reciprocally" in a longitudinal direction in the manner of a piston of an automobile engine (App. 93a, 96a-99a, 105a). The pivoting slapper plates of Koppers' devices are of a type well-known in the prior art, as shown by the patents to Spiess, Evans and Link (App. E, Refs. 16, 7 and 20) and do not meet the requirement of Claim 1 for a reciprocating slapper plate added by amendment (App. 256a - 257a, 261a - 262a) as S & S "gave up" a claim to devices that do not have reciprocating slappers.

- (3) In Koppers' Two Production Models, The Pusher Plate Is Not Mounted for Limited Vertical Movement Relative to the Means for Supporting It, As Required by
The Amendments To Claim 1

Claim 1 specifically requires that an infringing device must have:

- 1) "means for supporting the said pusher plate so that it remains in a substantially vertical position"

(The patent specification describes this "means" as the double bicycle chain with the downwardly extending plate 90), and

- 2) in addition, Claim 1 was amended to require that "said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate,"

(The patent specification describes the "means" for the pusher plate to slide vertically up and down on the double bicycle chain and support plate 90 as being the wheels 105a, b, c, and d which ride on vertical rails 107 and 108 (App.E4, column 3, lines 33-39), as shown in Figure 2 (on the left side of this page).

Accordingly, in order for Koppers' production devices to infringe Claim 1, they must have:

- 1) the double bicycle chain structure with the plate 90 or its close equivalent, and
- 2) the limitation added by amendment requiring a mounting for vertical movement of the pusher plate relative to the support plate 90 such as the wheels 105, and rails 107 and 108 which allow the pusher plate 92 to slide vertically relative to the support plate 90 on the double bicycle chain or its close equivalent.

S & S is estopped by the amendment from claiming infringement by devices which do not have a pusher plate that slides up and down vertically relative to the support which holds the pusher plate in a vertical position.

The structure employed in Koppers' production machines for supporting the pusher plate comprises a piston to which the pusher plate is rigidly fixed and a pneumatic cylinder by which the piston and the pusher plate thereon are thrust forward horizontally to cause the pusher to displace a top portion of the blank stack a

a short distance (App. 102a-103a, 107a, 189a - 190a, 201a - 203a, 209a - 210a). Koppers' production machines do not make use of any chains for supporting a pusher plate, or of any support plate corresponding or equivalent to plate 90 of the patent, or of any structure corresponding or equivalent to the wheels 105a, etc., and rails 107, 108 of the patent for mounting the pusher plate for vertical movement on a supporting member (App. 271a - 273a).

The construction and the manner of operation of the structures used in all Koppers machines including the prototype for supporting the pusher plate are distinctly different from and are not equivalents of the structures described for supporting the pusher plate in the specification of the patent in suit. In addition, Koppers' production devices all lack the required element of combination Claim 1 requiring structure that allows the pusher plate to be slideably moveable in a vertical direction relative to the support 90 and bicycle chain mechanism. Thus, there can be no infringement of Claim 1 by Koppers' production devices as a complete element of the Claim is missing. This rule is set out in Svenska Aeroplan Aktiebolaget v. Mergenthaler Lino. Co., 410 F. 2d 979 (2nd Cir., 1969) as follows at 981:

"*** These are combination claims; SAAB concedes that the individual elements of these claims are old, invention lying in the totality of the combination of these elements. The rule is clear that with regard to such combination claims, an accused device infringes only if each essential element of the combination claim finds its response in the accused device.***"
(Emphasis supplied).

APART FROM FILE WRAPPER ESTOPPEL, THERE IS NO INFRINGEMENT, AS WELL ESTABLISHED LAW PROHIBITS A FINDING OF INFRINGEMENT BECAUSE THE PRIOR ART LIMITS THE SCOPE OF THE CLAIM AND THERE IS NO IDENTITY OF STRUCTURE, FUNCTION AND OPERATIONAL MEANS BETWEEN THE CLAIMED SUBJECT MATTER AND KOPPERS' ACCUSED DEVICES

The Law Re Doctrine Of Equivalents

It is well settled that the claims must be construed in the light of the specification and drawings. Schriber-Schroth v. Cleveland Trust Co., 311 U.S. 211 (1940); International Latex Corp. v. Warner Bros. Co., 276 F.2d 557 (2nd Cir., 1960); in the International Latex case, 276 F.2d at 563 in approving Carl Braun, Inc. v. Kendall-Lamarr Corp., 116 F.2d 663, 665, (2nd Cir., 1941) the Court stated:

"Infringement is not proved simply by the language used in a claim without regard to the specifications. It must be proved by showing that the claim covers what is alleged to infringe when the claim is read upon the specifications, which describe the invention." (Emphasis supplied)

Further, where the alleged invention, if any, is at best extremely narrow, S & S may not resort to the doctrine of equivalents in order to expand the scope of the claims. The Court in International Latex, supra, 276 F.2d at 564 followed the rule set out in Deitel v. Unique Specialty Corp., 54 F.2d 359 (2nd Cir., 1931). In Deitel, the Court refused to apply the doctrine of equivalents where there was only a trifling step forward, if any as follows at p. 360:

"The supposed infringement is within the claims, except that the channel members are not separate, but integral with the wall 1 of the lower member, and with the edges, 2¹ of the upper. Ordinarily we should not insist upon so slight a difference, but the invention is at best extremely narrow, and we can see no ground for resorting to the doctrine of equivalents when the claims speak plainly and the invention is a trifling step forward. Claude Neon Lights v. Machlett, 36F. (2d) 574, 576 (C.C.A.2)."

Similarly, in Reiner v. I. Leon Co., 324 F.2d 648 (2nd Cir., 1963) the Court pointed out that a range of equivalents is not applicable to a minor invention when the advance is a small one in a crowded field and that the prior art also limits the scope of the patent claims and prevents a finding of equivalence. On this point, the Court in Reiner stated (324 F.2d 648) as follows at 651:

"***However, we do not understand plaintiffs to argue that the doctrine of equivalents is applicable here. Nor could they. The range of equivalents allowed is small when the advance is a small one in a crowded field. International Latex Corp. v. Warner Bros. Co., 276 F.2d 557, 563-564 (2nd Cir.), cert. denied, 364 U.S. 816, 81 S. Ct. 47, 5 L.Ed. 2d 47 (1960); Nelson v. Batson, 322 F.2d 132, 135 (9th Cir. 1963). Thus, the prior art that limits the scope of plaintiffs' claim also prevents a finding of equivalence."
(Emphasis supplied)

At trial, S & S seemed to rely on the end result to prove infringement. However, the fact that an accused device obtains the same result as a patented device is not determinative as there must be identity in structural means and function

before there is infringement. This general rule is set out Warner and Swasey Co. v. Held, 413 F.2d 229 (7th Cir., 1969) where the Court stated at 232:

"There was some discussion in the briefs as to the application of the doctrine of equivalents. Plaintiff seems to rely on the end result obtained. It has been said 'If the same results are obtained by a construction which is not an equivalent of the patented device the accused structure does not infringe.' Independent Pneumatic Tool Co. v. Chicago Pneumatic Tool Co., 96 F.Supp. 70, 74, aff. 194 F.2d 945 (7 Cir., 1952). We have noted that there must be real identity of means, operations and result. North Star Ice Equipment Co. v. Akshun Mfg. Co., 301 F.2d 882 (7 Cir., 1962). Hence, plaintiff's reliance on the doctrine of equivalents is not applicable in this case. (Emphasis supplied)

The rule that there can be no infringement where the Koppers understackers differ in both structure and function was emphasized by the Second Circuit Court of Appeals' decision in the Reiner case, supra, as follows at 324 F.2d, at 651:

"This structural difference between plaintiffs' spring and defendant's new spring is paralleled by a functional difference.***"

The Law Re Construction Of The
Term "Means" Used In A Patent Claim

The S & S patent in suit uses the term "means" on two occasions in Claim 1 as follows:

- (1) "and means for supporting the said pusher plate so that it remains in a substantially vertical position when in contact with the said blank stack."
- (2) "said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate."

The Patent Statute, 35 U.S.C. §112 allows an element in a claim for a combination to be expressed as a "means" without recital of structure. However, with reference to making a determination of a range of equivalents 35 U.S.C. §112 specifically provides that

"such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

In interpreting this section the courts have been aware that the term "means" may be used to claim an unwarranted range of equivalents. As a result the courts construed the term "means" to be limited to the corresponding structure described in the patent specification or very close equivalents in order to protect the public from unwarranted claims to a patent monopoly.

For instance in Hazeltine Research Inc. v. Firestone Tire & Rubber Co., 468 F. 2d 1277 (4th Cir. 1972) the Court stated

at 468 F. 2d 1279:

But the patentee cannot by framing his claims in terms of "means" preempt every conceivable circuit designed for a similar purpose. Bullard Company v. General Electric Company, 348 F. 2d 985, 989 (4th Cir. 1965).

The same conclusion was reached in Del Francia v. Stanthony Corp., 278 F. 2d 745 (9th Cir., 1960). There the Court found that the patent in suit was not infringed in light of the interpretation given the claim. The Court stated at 278 F. 2d at 748:

In dealing with a "means" element in a machine, however, because of the inherent difficulty, it is all the more important to construe that element in light of the disclosure. An inventor of an improvement "cannot by the mere use of the word 'means' appropriate any and all kinds of mechanism or devices which may perform the specified function, or any other mechanism or device than that which is described in the patent or *** its mechanical equivalent."

See also Cincinnati Milling Machine Co. v. Turchan, 208 F. 2d 222 (6th Cir., 1953); Graphicana Corp. v. Baia Corp., 472 F. 2d 1202 (6th Cir., 1973); Hazeltine Research Inc. v. Firestone Tire & Rubber Co., 468 F. 2d 1277 (4th Cir., 1972).

In agreement with the above decisions is the Second Circuit's ruling in Western States Machinery Co. v. S.S. Hepworth Co., 147 F.2d 345 (2d Cir., 1945) where Learned Hand found that the "means" in question had limited equivalence when he stated at 147 F.2d 351:

"Claim 9 may still be valid; we do not say; but, if it is, it covers only means which stop the water supply by a measurably similar mechanical train as that shown in the specifications: the defendant's apparatuses do not infringe it."

In light of these decisions S & S is not permitted to expand the claimed "means" beyond the structure shown in the patent specification or something "measurably similar."

The Facts Proving That There is No Identity
Of Structure, Function And Operational Means Be-
tween The Claimed Subject Matter
And Koppers' Accused Devices

As discussed above with reference to the scope and content of the prior art and the differences between the claimed subject matter and the prior art, it is clear that the advance over the prior art, if any, of the subject matter of Claim 1 is a small one in a crowded art. Accordingly, as in the Reiner case, supra, the range of equivalents allowed for Claim 1 is small and, therefore, the claim should be given a narrow scope for determining whether or not Koppers' devices infringe Claim 1. As shown in detail below, apart from File Wrapper Estoppel, Koppers proved at the trial a separate ground of non-infringement of Claim 1 based on the fact that

there are substantial differences between the limitations in the language of the claim and the structure and function of Koppers' devices. There is no identity of structure, function and operational means between the device claimed in the suit patent and Koppers' accused devices. These differences include the following:

Difference 1: Koppers' side rollers "remove" top of stack instead of the pusher removing the top of the stack as required by Claim 1.

Difference 2: Koppers' devices use a piston and cylinder support and not the double bicycle chain support means required by Claim 1.

Difference 3: Koppers' pusher plate operates intermittently and not periodically as required by Claim 1.

Difference 4: Koppers' slapper plates pivot and do not reciprocate as required by Claim 1.

Difference 5: Koppers' devices do not have blank accumulation with vertical pusher movement as required by Claim 1.

Difference 6: Koppers' production devices lack a complete support element required by Claim 1 for a combination of elements.

(1) Claim 1 Is Not Infringed Because
None of Koppers' Devices Has A Pusher Plate
That Removes The Top Portion Of The Stack

Claim 1 of the patent in suit requires, inter alia,

"***a longitudinally movable plate for periodically pushing a top portion of the stack of said blanks from said accumulating device" and

"said stack being fed with blanks as the movable plate is removing said top portion from the stack." (Emphasis supplied)

Thus, the clear language of the above portion of Claim 1 requires that the pusher plate remove the top portion of the stack by pushing it from the accumulating device. In contrast, all of Koppers' understackers including the single prototype model and two production models have a pneumatically operated pusher plate mounted on a

piston and cylinder mechanism that only displaces the top portion of the stack by a rapid short stroke extending only a short distance of 5" over the underlying stack and does not remove the top portion of the stack from the accumulating device (App. 93a-94a, 102a, 103a, 193a, 207a, 209a, 211a, 272a, 274a).

In order to effect the removal of the top portion of the stack, Koppers' devices do not use a pusher as required by Claim 1, but, in contrast, use sets of side rollers and opposed vertical conveyor belts spaced apart alongside the stack which do effect the removal of a top portion of the stack when the selected number of blanks is pushed into engagement with vertical conveyor belts by the short fast stroke of the pusher plate. Without the side rollers and vertical conveyor belts, the top portion of the stack would "stop dead" and there would be no way for the top of the stack to be removed and there would be a "tremendous jam-up" (App. 94a, 100a, 102a-103a, 107a, 209a-213a, 264a-274a).

The construction of Koppers' pusher which only displaces the top portion of the stack a short distance by means of a pusher plate mounted on the end of a pneumatic piston is again a structure well-known in the prior art, as shown by the Gjostein patent (App. E, Ref. 23). In Gjostein, a pusher 15 on a pneumatic piston rod 16 partially displaces the top portion of the stack S-a (App. 275a-276a). Without additional machinery, such as Koppers'

vertical side conveyors, neither the Gjostein device nor Koppers' pusher would bring about the requirement of Claim 1 of "removing said top portion from the stack."

Thus, in order for Koppers' devices to be infringed by the language of Claim 1 requiring a pusher mounted on a double bicycle chain that removes the top portion of the stack from the accumulating device, it would be necessary to allow a broad range of equivalents which would include two separate completely different mechanical mechanisms, viz:

- i) a rapid 5" stroke pneumatically operated pusher, and in addition,
- ii) a pair of vertical side rollers for effecting removal from the stack.

(2) Claim 1 is Not Infringed Because
Koppers' Devices Do Not Use a Double Bicycle
Chain for the Means Supporting the Pusher Plate
In a Vertical Position

The requirement for a double bicycle chain for a pusher support in Claim 1 is found in the following language:

***means for supporting the said
pusher plate so that it remains in a
substantially vertical position when in
contact with the said blank stack,***"
(Emphasis supplied)

As it is axiomatic in Patent Law that a claim must be interpreted in light of the specification and drawings, it is

crystal clear that the claimed "means" for supporting the pusher plate is the double bicycle chain and support 90, illustrated in Figure 1 of the drawings and described in the patent specification as follows, at column 3, lines 8-13 (App. E4):

"***These two chains provide means by which the plate support 90 and pusher plate 92 may be maintained in a substantially vertical position throughout the operation of the device and particularly through the entire time when the plate 92 contacts the rear edge of the blanks.***"

The pertinent patent statute, 35 U.S.C. § 112 allows an element in a claim to be expressed as a "means" without recital of structure, however the statute specifically states that:

"***such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

Thus, in order for Koppers' devices to infringe Claim 1, they must have a "double bicycle chain" or a substantially similar structural equivalent in order to come within the narrow scope of Claim 1 which should be strictly construed.

All of Koppers' devices, including its single prototype device and two production models, have a pusher plate mounted on a pneumatically operated piston and cylinder mechanism which moves the pusher plate into contact with the portion of the blank stack to be displaced by the pusher (App. 92a, 102a-103a, 201a-203a, 209a-210a). Thus, the structure and method of operation of Koppers' pneumatic cylinder and piston for supporting the pusher and the

claimed double bicycle chain and support 90 are completely different in structure and function, and therefore are not equivalent. (App.272a)

(3) Claim 1 is Not Infringed Because None of Koppers' Devices Has a Pusher that Operates "Periodically" as Required by Claim 1

Claim 1 of the suit patent requires a "periodically" movable pusher plate for pushing the stack of blanks as follows:

"***a longitudinally movable plate for periodically pushing a top portion of the stack of said blanks from said accumulating device***" (Emphasis supplied)

The patent specification makes it clear that it is important that the pusher of the patent in suit be "periodically" operated in order to deliver the correct number of blanks (App.E4, column 3, lines 33-36).

The requirement that the pusher plate of Claim 1 be "periodically" operated was considered a significant limitation by the patentee as shown by the Patent Office file history (App.E18). In the second rejection of the application by the Patent Office, dated July 7, 1958, paper 6 (App.E46), the Examiner rejected the application on prior art including the Hess and Chandler patents (App.E, Ref. Nos. 13 and 17) which disclose pusher plates operating "intermittently." In order to overcome this rejection, the applicant in Amendment B filed on January 6, 1959 (App.E48) argued as follows (App.E53):

"The ejection means of both the Hess and Chandler patents are operated intermittently thereby making them totally unsuited for a high speed stacking device such as illustrated in the instant application. That is, a member operated intermittently under conditions of high impact loading will soon fail." (Emphasis supplied)

All of Koppers' devices have a pusher plate that operated "intermittently" to displace a top portion of the stack. As the blanks are moved into the Koppers' understackers by a blank feeder they pass a photoelectric counting device, and when the predetermined count is reached an electrical pulse intermittently causes the rapid short stroke pusher to displace the top portion of the stack (App.92a-94a, 215a). When the feeder machine keeps running and there is no feed of blanks, there is no "periodic" movement of the pusher plate because the pusher plate does not operate and remains motionless until the set number of blanks are fed past the counter so the pusher operates "intermittently" (App.194a, 215a-216a). All of Koppers' devices have pusher plates that operate "intermittently" in the manner of the prior art Chandler patent (App.E, Ref. 17) which also uses a counter to actuate a pusher plate after a certain number count is reached (App.268a-270a).

(4) Claim 1 is Not Infringed by Koppers' Devices
Which Have Slapper Plates That Pivot and Which
Do Not Reciprocate as Required by Claim 1

The slapper plate 20 of the patent in suit reciprocates in a linear direction and moves to the position 20¹ from the position 20 as it reciprocates, as shown in Figure 1 of the patent drawings (App.54a). In order to exactly define this reciprocal motion which is back and forth like a reciprocating piston (App. 262a) and to avoid the cited prior art patents such as Evans (App.E, Ref. 7) and Link (App.E, Ref. 20, Fig. 9) that disclose pivoting slapper plates which swing back and forth in an arcuate path about a pivot rod, Claim 1 was amended (App.256a, 257a, 261a, 262a) so that the slapper is defined as: "***being periodically reciprocally movable in a longitudinal direction."

All of Koppers' understackers, including its single prototype device and two production type devices have slapper plates that pivot or swing back and forth about a pivot bar and do not move "reciprocally" in a longitudinal direction in the manner of a piston of an automobile engine (App.93a, 96a-99a, 105a). The pivoting slapper plates of Koppers' devices are of a type well-known in the prior art, and do not meet the requirement of Claim 1 for a reciprocating slapper plate (App.256a, 257a, 261a-262a).

(5) Claim 1 is Not Infringed Because None of Koppers' Devices Has Blank Accumulation With Vertical Pusher Movement as Required by Claim 1

As pointed out in detail above, Claim 1 was amended to avoid the prior art and requires:

- a) a blank stack being fed from below; and
- b) a pusher plate mounted for limited vertical movement as the stack is being fed with blanks as the movable plate is removing the top portion of the stack.

The evidence at the trial established that in the normal operation of S & S's machines at 200 blanks a minute, approximately nine (9) blanks accumulate in a pile under the pusher plate which is movable vertically to accommodate the rise in the underlying stack due to the introduction of the nine (9) blanks (App.60a, 266a, 271a).

In contrast, the evidence clearly shows that there is no accumulation of blanks under the moving pusher plate of any of Koppers' devices including its single prototype, and, accordingly, there is no need for, nor is there any vertical movement of the pusher plate during the forward pushing stroke. The witnesses, Messrs. Pulda (App.95a, 107a, 191a-192a) and Fischer (App.271a-274a, 309a, 318a) both testified that there was no feed of blanks under the pusher of Koppers' single prototype or production models during the pushing stroke. This fact was confirmed by the Deposition Testimony of Mr. Ley (App.E117) and Mr. Lopez (App.E120-1).

Even the S & S witness, Mr. Cantor, admitted on cross-examination that he had never seen an accumulation of a plurality of blanks under the pusher of Koppers' devices as he never saw more than one blank coming in during one push (App. 596a-597a). In addition, he did not know if the leading edge of the blank he saw coming had passed under the pusher (App. 597a). And finally, Mr. Cantor, a patent attorney, informed the Court that Claim 1 requires "plural blanks" to be fed underneath the pusher (App. 582a).

Further details concerning this point are set out above in the section concerning the defense of File Wrapper Estoppel.

(6) In Koppers' Production Models,
The Pusher Plate Is Not Mounted For
Limited Vertical Movement Relative To The Means
For Supporting It, So That A Complete Element
Required By Claim 1 Is Missing

With reference to Koppers' production devices, there is no infringement of Claim 1 which specifically requires that an infringing device must have:

- a) "means for supporting the said pusher plate so that it remains in a substantially vertical position"

(double bicycle chain with the downwardly extending plate 90), and

- b) in addition, Claim 1 was amended to avoid the prior art so that it requires that

"said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate,"

(the pusher plate can slide vertically up and down on the double bicycle chain and support

plate 90 by means of wheels 105a, b, c, and d which ride on vertical rails 107 and 108 (App. E4, column 3, lines 33-39), as shown in Figure 2 of the patent drawings).

Accordingly, in order for Koppers' production devices to infringe Claim 1 requiring a pusher plate "mounted for limited vertical movement relative to the means supporting it", they must have the double bicycle chain structure with the plate 90 and a mounting for vertical movement of the pusher plate such as the wheels 105, and rails 107 and 108 for allowing the pusher plate to slide vertically relative to the support plate 90 on the double bicycle chain or its close equivalent.

The structure employed in Koppers' production machines for supporting the pusher plate comprises a piston to which the pusher plate is rigidly fixed and a pneumatic cylinder by which the piston and the pusher plate thereon are thrust forward horizontally to cause the pusher to displace a top portion of the blank stack a short distance (App. 102a - 103a, 107a, 189a-190a, 201a-203a, 209a-210a). Koppers' production machines do not make use of any chains for supporting a pusher plate, or of any support plate corresponding or equivalent to plate 90 of the patent, or of any structure corresponding or equivalent to the wheels 105a, etc., and rails 107, 108 of the patent for mounting the pusher plate for vertical movement on or relative

to a supporting member (App. 271a - 273a).

The construction and the manner of operation of the structures used in Koppers' production machines for supporting the pusher plate are distinctly different from and are not equivalents of the structures described for supporting the pusher plate in the specification of the patent in suit. Koppers' production devices all lack the required element of combination Claim 1 requiring structure that allows the pusher plate to be slideably moveable in a vertical direction relative to the support 90 and bicycle chain mechanism. Thus, there can be no infringement of Claim 1 by Koppers' production devices as a complete element required for the combination of the claim is missing. Svenska Aeroplan Aktiebolaget v. Mergenthaler Lino. Co., 410 F.2d 979, 981 (2nd Cir., 1969).

Summary of Argument
Re Non-Infringement

In summation, there is no infringement of Claim 1 because there is no identity in the structure, function and operational means between the machine claimed in the suit patent and Koppers' accused machines. Reiner v. I. Leon Co., 324 F.2d 648 (2nd Cir., 1963); Warner and Swasey Co. v. Held, 413 F.2d 229, 232 (7th Cir., 1969).

The trial court was fully supported by the preponderance of the evidence presented at trial when it made the following

findings (App. 616a - 617a):

"***a comparison of the two machines, their structural design and the manner in which they operate, gives rise to a finding that although they may perform similar functions they do it by quite different means."

"However, reference to the structural design of the two machines (Koppers' device and S & S's patented device) and the manner in which they perform their tasks discloses that there are significant differences between the two machines."

"At best defendant's invention was extremely narrow. His position was not enhanced by the difficulties he encountered in the process of obtaining the patent. Consequently, the court holds that the Universal Understacker, which employs a complicated ejector-removal system, does not infringe upon Claim One of the Shields Patent. The Triax Co. v. Hartman Metal Fabricators, Inc., Docket Nos. 71-1843, 71-1978 (Decided May 31, 1973, 2d Cir.), International Latex Corp. v. Warner Bros. Co., supra at 563-65."

In addition, as pointed out above, Koppers' devices use structure known in the prior art which avoids infringement of Claim 1. In this connection, the Court in Reiner, supra, set out this rule at p. 651:

"Because the policy of the law is to construe strictly the grant of a patent monopoly, there is nothing wrong or immoral in any sense for a manufacturer deliberately to create an article on the basis of the prior art in order

to avoid infringement. Eastman Oil Well Survey Co. v. Sperry-Sun Well Surveying Co., 131 F.2d 884, 887 (5th Cir. 1942) Reversed and remanded." (Emphasis supplied)

And finally, the Court of Appeals of the Second Circuit set out the applicable rule in this connection in Reiner, supra, at 324 F.2d 648:

"***the claimed difference in the design of the spring requires a judgment of non-infringement if it is so pronounced that we must conclude that the spring in the accused clamp does not respond to the disclosures in plaintiffs' patent." (Emphasis supplied)

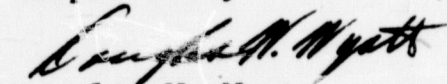
To paraphrase the above quotation in Reiner, in terms of the present case:

The differences in the design of the Koppers machines are so pronounced as to require a judgment of non-infringement because we must conclude that Koppers' devices do not respond to the disclosures in S & S's patent.

VII. CONCLUSION

The suit patent is invalid and not infringed and the Judgment of the Court below should be affirmed.

Respectfully submitted,



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United States Court of Appeals
for the Second Circuit

Koppers Company, Inc., and
Universal Corrugated Box Machinery
Corporation,
Plaintiffs-Appellees

v.

S & S Corrugated Paper Machinery Co.,
Inc.,
Defendant-Appellant

**AFFIDAVIT
OF SERVICE**

STATE OF NEW YORK,

COUNTY OF *New York*, ss:

Nathan Chambers

being duly sworn,

deposes and says that he is over the age of 18 years and resides at

510 Atlantic Avenue, Brooklyn, New York

That on the *29th* day of *August*

1974 at *260 Madison Ave*

he served the annexed *Summons* upon

O. Strolenz, Esq., Berl & Soffen, Attorneys for Defendant - Appellant
in this action, by delivering to and leaving with said *attorneys*

2 true cop thereof.

DEPONENT FURTHER SAYS, that he knew the person so served as aforesaid to be the person mentioned and described in the said

Deponent is not a party to the action.

Sworn to before me, this *29th*

day of *August* 1974 }

Nathan Chambers

John V. DiSposito
JOHN V. DIPOSITO
Notary Public, State of New York
No. 307952350
Qualified in Nassau County
Commission Expires March 30, 1975